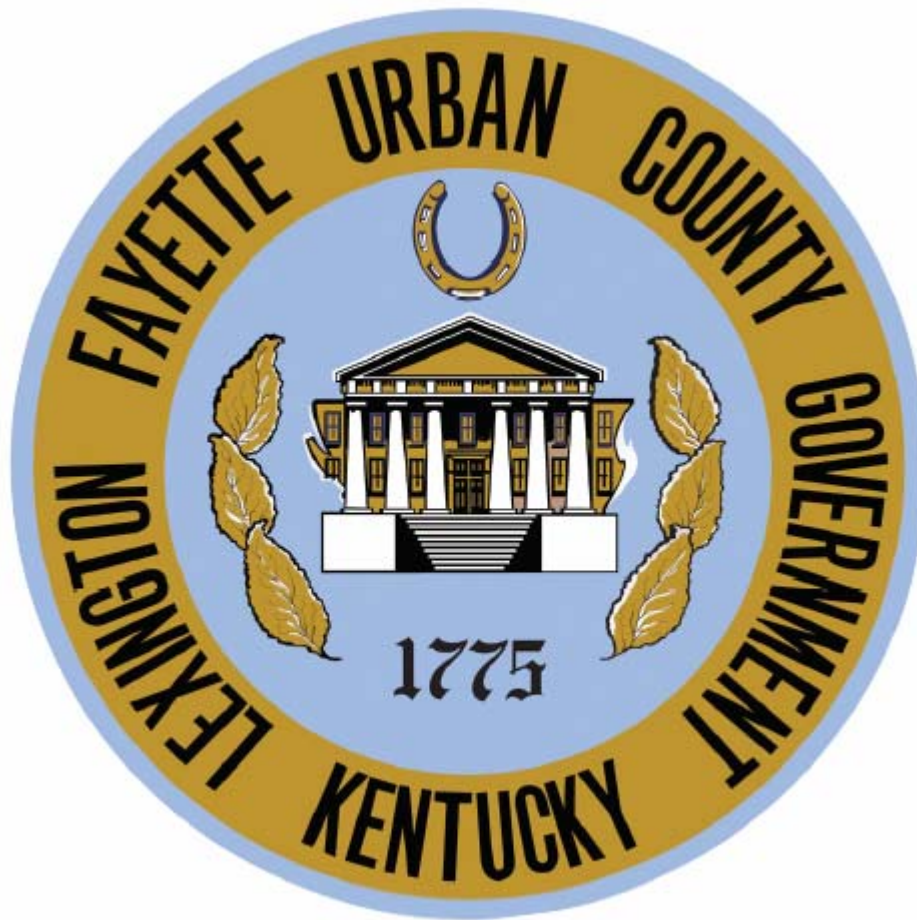


Stormwater Quality Management Program

for

Lexington-Fayette
Urban County Government



January 1, 2008

**Lexington-Fayette Urban County Government
Stormwater Quality Management Program (SWQMP)
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ACRONYMS

1. "BMPs" is an acronym for Best Management Practices.
2. "CFR" is an acronym for Code of Federal Regulations.
3. "CR" is an acronym for Cane Run.
4. "CS" is an acronym for Construction Site Stormwater Runoff Control program element.
5. "CWA" is an acronym for Clean Water Act.
6. "DEEM" is an acronym for Division of Environmental and Emergency Management, Department of Public Safety, Lexington-Fayette Urban County Government.
7. "DEQ" is an acronym for Department of Environmental Quality, Lexington-Fayette Urban County Government.
8. "DOE" is an acronym for Division of Engineering, Department of Public Works and Development, Lexington-Fayette Urban County Government.
9. "DPW" is an acronym for Department of Public Works and Development, Lexington-Fayette Urban County Government.
10. "DWAQ" is an acronym for Division of Water and Air Quality, Department of Environmental Quality, Lexington-Fayette Urban County Government.
11. "EH" is an acronym for East Hickman.
12. "EPA" is an acronym for Environmental Protection Agency.
13. "GIS" is an acronym for Geographic Information System.
14. "IDDE" is an acronym for Illicit Discharge Detection and Elimination.
15. "IN" is an acronym for Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention program element.
16. "KAR" is an acronym for Kentucky Administrative Regulations.
17. "KDOW" is an acronym for Kentucky Division of Water.
18. "KPDES" is an acronym for Kentucky Pollutant Discharge Elimination System.
19. "KRS" is an acronym for Kentucky Revised Statutes.
20. "LFUCG" is an acronym for the Lexington-Fayette Urban County Government.
21. "LPCA" is an acronym for Legal Prohibition and Control Authority program element.
22. "LTMN" is an acronym for Long Term Monitoring Network.
23. "MEP" is an acronym for Maximum Extent Practicable.

24. "MON" is an acronym for Water Quality Monitoring program element.
25. "MS4" is an acronym for Municipal Separate Storm Sewer System.
26. "NE" is an acronym for North Elkhorn.
27. "NPDES" is an acronym for National Pollutant Discharge Elimination System.
28. "PE" is an acronym for Public Education and Outreach program element.
29. "PI" is an acronym for Public Involvement and Participation program element.
30. "PPMO" is an acronym for Pollution Prevention for Municipal Operations program element.
31. "PPRC" is an acronym for Pollution Prevention in Residential and Commercial Areas program element.
32. "QA/QC" is an acronym for Quality Assurance and Quality Control.
33. "RR" is an acronym for Reporting and Record Keeping program element.
34. "SARA" is an acronym for Superfund Amendments and Reauthorization Act.
35. "SE" is an acronym for South Elkhorn.
36. "SWQMP" is an acronym for Stormwater Quality Management Program.
37. "SWPPP" is an acronym for Stormwater Pollution Prevention Plan.
38. "TB" is an acronym for Town Branch.
39. "TMDL" is an acronym for Total Maximum Daily Load.
40. "UCC" is an acronym for LFUCG's Urban County Council.
41. "WH" is an acronym for West Hickman.
42. "WM" is an acronym for Watershed Management program element.
43. "WR" is an acronym for Wolf Run.
44. "WWTP" is an acronym for Wastewater Treatment Plant.

DEFINITIONS

Definitions contained in the Kentucky Administrative Regulations (KAR) and Federal NPDES rules apply where one is not specified below. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

1. “Active Construction Sites” means those sites within LFUCG’s jurisdictional boundary (excluding Agricultural Activities) where there are construction activities that result in the disturbance of one (1) or more acres of total land and those sites that include a disturbance of less than one (1) acre of total land area that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one (1) acre or more. Construction activities include clearing, grading, and excavating. A site shall be considered “active” until such time that the site is finally stabilized, temporary best management practices have been removed, and, where applicable, the Notice of Termination has been filed with the KY Division of Water and a copy provided to LFUCG. Stabilized shall mean the following:
 - all soil-disturbing activities at the site have been completed
 - a uniform perennial vegetative cover with a density of 70% or more has been established for unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures such as riprap, gabions, or geotextiles have been employed
 - ditches, channels, ponds, etc. have been stabilized
2. “Agricultural Activities” are activities related to planting of crops or pasture associated with farming or the horse industry, excluding construction for buildings or structures associated with such activities.
3. “Best Management Practices” or “BMPs” means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control stormwater runoff.

4. "CFR", or Code of Federal Regulations, is the official publication for new federal regulations.
5. "CWA" means Clean Water Act, also referred to as "the Act" (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 6-483 and Pub. L. 97-117, 33 U.S.C. 1251, et.seq., as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act."
6. "Director" means the Director of the Kentucky Division of Water, or an authorized representative of that position.
7. "Discharge", unless indicated otherwise, refers to discharges from LFUCG's Municipal Separate Storm Sewer System (MS4), subject to Section 402 of the CWA.
8. "EPSC" is an acronym for "erosion prevention and sediment control," a program for protection of receiving streams from Active Construction Site runoff to the Waters of the United States.
9. "Grab sample" means an instantaneous sample collected from the flow at a sampling location, either in-stream or at an outfall.
10. "High-Risk Commercial Facilities" are commercial facilities that LFUCG determines have a reasonable potential to discharge pollutants of concern at significant levels to the MS4.
11. "Illicit connection" means any man-made conveyance connecting a non-stormwater discharge directly to LFUCG's municipal separate storm sewer system.
12. "Illicit discharge" means any discharge to LFUCG's municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a KPDES permit, other than the KPDES permit for discharges from the municipal separate storm sewer, and discharges resulting from fire fighting activities, or other de minimis activities allowable under the MS4 regulations.
13. "Industrial Facility" means any facility located within LFUCG's jurisdictional boundary from which there is a "stormwater discharge associated with industrial activity" as defined in 401 KAR 5:002 Section 1 (292), excluding Construction Sites. It also includes SARA Section 313 facilities referenced in 401 KAR 5:060

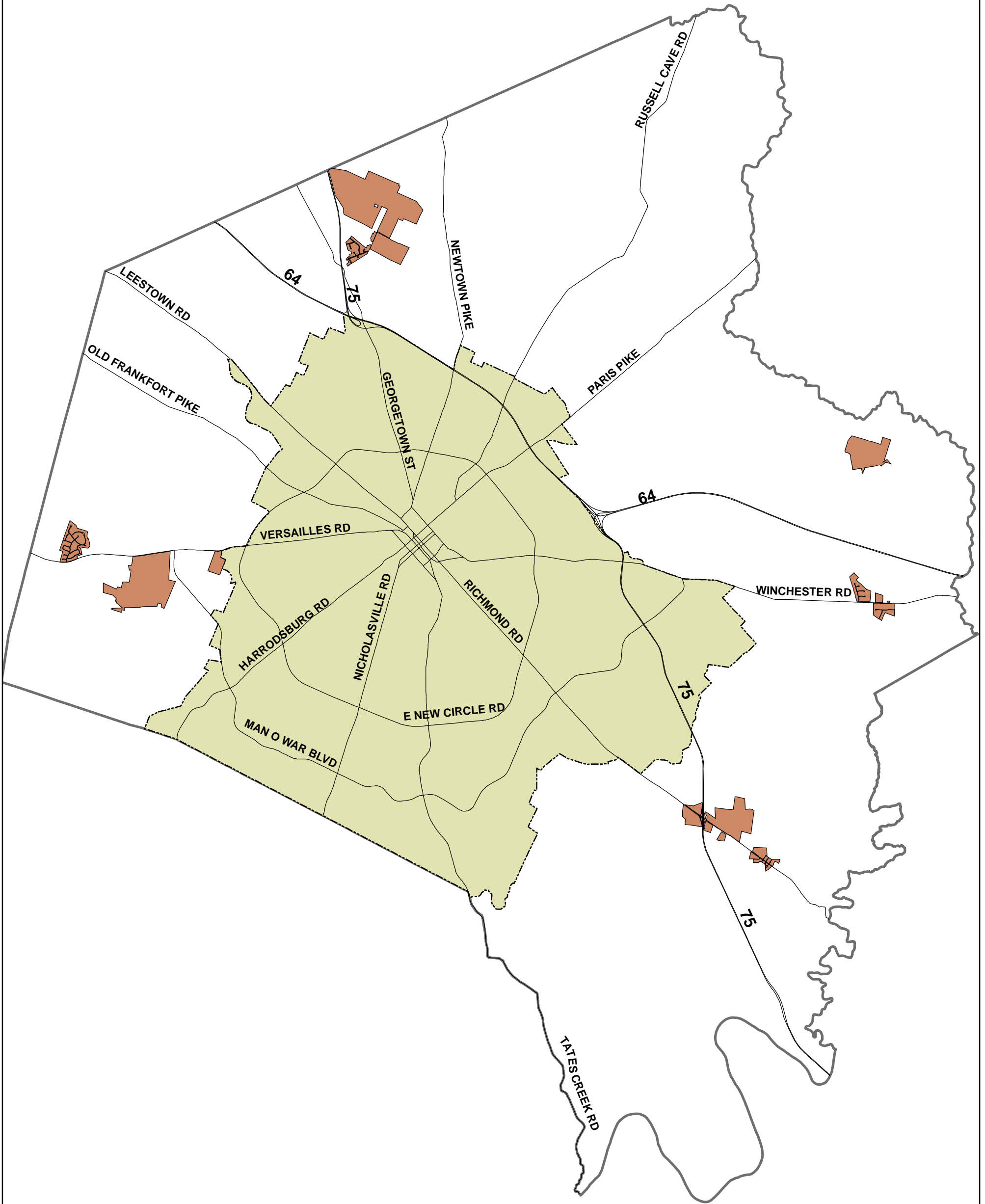
- Section 12(3)(b)4.c. that have a reasonable potential to discharge pollutants of concern at significant levels to the MS4 from industrial activities.
14. "Industrial Land Use" means land utilized in connection with manufacturing, processing, or raw materials storage at facilities identified under 401 KAR 5:002 Section 1 (292), excluding construction sites.
 15. "KPDES", or "Kentucky Pollutant Discharge Elimination System," is the effluent permitting program in the Commonwealth of Kentucky for point source discharges.
 16. "Large Industrial Outfall" means an outfall from an Industrial Facility that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).
 17. "LFUCG Facilities" are land, properties, and/or buildings which are owned and operated, or leased and operated, by the Lexington-Fayette Urban County Government.
 18. "LTMN", or "Long Term Monitoring Network," is the comprehensive in-stream monitoring program in Fayette County for the collection of chemical, physical, and biological data.
 19. "Major municipal separate storm sewer outfall (or "major outfall") means a municipal separate storm sewer outfall within the Urban Area that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive stormwater from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).
 20. "Major Watershed" means one of the seven urbanized watersheds in Fayette County that include Cane Run, East Hickman, North Elkhorn, South Elkhorn, Town Branch, West Hickman, and Wolf Run.

21. “MEP”, or “Maximum Extent Practicable,” is the control standard for discharges from the Municipal Separate Storm Sewer Systems established by CWA §402(p).
22. MS4, or “Municipal Separate Storm Sewer System”, is the conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels and storm drains) that is owned or operated by LFUCG that discharges to waters of the United States;
 - a. designed or used for collecting or conveying stormwater;
 - b. which is not combined sewer; and
 - c. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.
23. “Municipal Waste Facilities” are LFUCG Facilities that actively treat, store, or dispose of sewage or refuse. This includes the Haley Pike Landfill, the Material Recovery Facility on Manchester Street, the Town Branch WWTP, and the West Hickman WWTP.
24. “NPDES”, or “National Pollutant Discharge Elimination System,” is the effluent permitting program for point source discharges that is administered by the United States Environmental Protection Agency.
25. "Outfall" means a “point source” at the point where a municipal separate storm sewer discharges to waters of the United States, but does not include open conveyances connecting two (2) municipal separate storm sewers, or pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.
26. “Permittee” means the holder of a KPDES permit who is responsible for compliance with permit conditions relating to the discharges that it owns or operates.
27. “Point Source” means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which

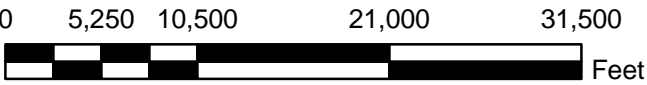
- pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.
28. "Storm Sewer," unless otherwise indicated, refers to a municipal separate storm sewer.
 29. "Stormwater" means stormwater runoff, snowmelt runoff, surface runoff and drainage.
 30. "Stormwater Discharge Associated with Industrial Activity" is defined at 40 CFR 122.26(b) (14).
 31. "Stormwater Quality Management Program," or "SWQMP," refers to a comprehensive program to manage the quality of stormwater discharged from the municipal separate storm sewer system. The SWQMP is considered a single document, even though it actually consists of separate programs (e.g. "chapters") for each permittee and references various Appendices.
 32. "Stormwater Quality Treatment Facilities" are post-construction stormwater controls which are designed to improve stormwater runoff quality.
 33. "Stormwater Pollution Prevention Plan," or "SWPPP," is a site-specific, written document that identifies potential sources of stormwater pollution at the site or facility, and describes best management practices and procedures the operator will implement to reduce pollutants in stormwater runoff from the site or facility.
 34. "TMDL", or "Total Maximum Daily Load," is a federally mandated program for the protection of streams and lakes by allocation of pollutant waste loads to significant sources of the pollutant in a watershed or stream reach.
 35. "Urban Areas" are areas within the LFUCG Urban Service Boundary and the following rural residential areas and concentrated commercial areas outside the Urban Service Boundary: Westmorland Road area, Athens Community, Eastpoint Drive area, Riviera Road area, Donelwal Drive area, Wellesley Heights Way area, Avon/Bluegrass Station Industrial Park area, Blue Sky Industrial Park area, Horse Park/Spindletop area, and Bluegrass Airport. The Urban Areas are delineated on the enclosed map and will be included in the KPDES Permit for the MS4, the boundary of which may change as more areas become urbanized.
 36. "Wet weather conveyances" are man made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in

direct response to precipitation runoff in their immediate locality and whose channels are above the groundwater table and which do not support fish and aquatic life and are not suitable for drinking water supplies.

"Urban Areas" for Implementation of LFUCG's Stormwater Quality Management Program



- Major Roads
- Urban Service Area
- Fayette County
- "Urban Areas" for Implementation of LFUCG's Stormwater Quality Management Program



Introduction

This document contains the Stormwater Quality Management Program (SWQMP) for the Lexington-Fayette Urban County Government (LFUCG). The SWQMP is a requirement of Part II.B. of the draft Kentucky Pollutant Discharge Elimination System (KPDES) Municipal Separate Storm Sewer System (MS4) discharge permit dated March 21, 2006 for LFUCG. The SWQMP was prepared by staff from the Department of Public Works and Development and the Department of Environmental Quality (the department responsible for managing the KPDES permit) and Tetra Tech, Inc., LFUCG's stormwater consultant. The SWQMP is intended to be detailed with respect to procedures and protocols for implementing the stormwater best management programs to ensure LFUCG personnel in the various departments and divisions have ample guidance and instruction. The SWQMP will also allow LFUCG to allocate financial resources in an efficient and effective manner, consistent with the objectives of the final permit.

The SWQMP will be a comprehensive program to manage the quality of stormwater discharged from LFUCG's storm sewer system and will be an integral part of the overall watershed management plan. The content of the SWQMP is based on the terms and conditions of the draft KPDES permit for the MS4. The SWQMP addresses the specific permit requirements for the following elements in the draft permit:

- Legal Authority
- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Pollution Prevention in Residential and Commercial Areas
- Pollution Prevention for Municipal Operations

- Industrial Facility and Municipal Waste Facility Pollution Prevention
- Water Quality Monitoring
- Reporting and Recordkeeping

An additional element, Watershed Management, was included in the SWQMP, but it is not in the draft permit. This element will serve to document the activities and efforts by major watershed and the resulting reports will guide stormwater management activities.

LFUCG's renewed KPDES Permit for its MS4 will apply to its MS4 throughout Fayette County due to LFUCG's status as a merged urban-county government. However, not all the SWQMP elements apply in rural areas of Fayette County. The following programs do not apply outside "Urban Areas," as defined in the SWQMP: Illicit Discharge Detection and Elimination (except as associated with the industrial facilities program), Pollution Prevention in Residential and Commercial Areas, and Pollution Prevention for Municipal Operations.

To implement the SWQMP, input will be needed from other LFUCG departments and divisions, the business community, and citizen groups as part of a stakeholder involvement process.

To be successful, the SWQMP must be easy to understand and implement. Keeping this in mind, it was developed by following the guiding principle that the SWQMP be clear, simple, and written in such a way that LFUCG staff responsible for stormwater quality can implement program elements. The objective is to ensure that staff understand their responsibilities, and that measurable goals are established to document the effectiveness of the program.

Each section of the SWQMP was developed by inserting the objectives and program element language from the draft permit and then developing a table of tasks with their frequency and responsible party noted, along with a set of

procedures and required documentation. As each of the programs and their corresponding program elements were developed, the following items were addressed:

- specific requirements of the draft permit.
- schedule and other terms and conditions of the proposed Consent Decree with the Commonwealth of Kentucky and the United States of America.
- existing procedures that need to be reviewed and potentially updated, and new procedures that need to be developed.
- documentation necessary to measure the effectiveness of the program.

As stated above, the format and content of the SWQMP is tied directly to the draft KPDES permit for the MS4. Therefore, the approach taken in this SWQMP is subject to change depending upon the final form of that permit issued by the Kentucky Division of Water.

SWQMP Summary of Measurable Goals

Following is a summary of the measurable goals contained in the program element tables throughout this document. For ease of reference, the measurable goals in the summary below are numbered the same as the ones in the tables. For example, measurable goal No. 1 under Watershed Management below is also shown as measurable goal No. 1 in table WM-1. References to “permit cycle” or “permit issuance” are to the issuance of the final KPDES permit for LFUCG’s MS4, which is expected to occur in 2008 following public notice and opportunity for comment on the draft permit and this SWQMP.

Watershed Management

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality.

1. Within 12 months of permit issuance, develop a report format for watershed assessment reports. These reports will serve as means for guiding stormwater management activities and the report content will include descriptions of current activities associated with each of the following:
 - Greenways
 - Stream restoration efforts
 - TMDLs
 - Floodplain conservation
 - Water quality and biological monitoring
 - Maintenance (including planting and mowing)
 - Detention basins and retention ponds
 - Pollutants of concern
 - Stakeholders
 - 319 Grants
 - Stormwater design and construction projects
2. By the end of the permit cycle, a watershed assessment report will have been written for each of the major watersheds according to the following schedule: Year 2 – Town Branch and Wolf Run, Year 3 – South Elkhorn, Year 4 – Cane Run and North Elkhorn, Year 5 – West Hickman and East Hickman.

Legal Prohibition and Control Authority:

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality, along with the Department of Law. See Appendix P for existing ordinances related to stormwater quality.

1. Within one year of permit issuance, conduct an ordinance review and propose changes for the UCC's consideration that would consolidate and address overlap of responsibilities related to stormwater pollution prevention.
2. Within one year of permit issuance, propose ordinance revisions for the UCC's consideration that would streamline enforcement procedures and include escalating remedies for addressing MS4 violations.
3. Within one year of permit issuance, develop and propose ordinance changes for the UCC's consideration to obtain authority to assess maximum penalties of at least \$10,000 per day, for violations related to the illicit discharge program, industrial program, or construction site program.
4. Within one year of permit issuance, develop and propose ordinance changes for the UCC's consideration to obtain authority to issue stop-work orders on construction sites for MS4 program discharge and BMP implementation violations without first appearing before a judge.
5. Within one year of permit issuance, develop and propose ordinance changes for the UCC's consideration to obtain authority to order responsible parties to take action to eliminate confirmed illicit discharges without first appearing before a judge.
6. Within two years of permit issuance, develop and propose an ordinance to the UCC that would require regulated Industrial Facilities and locally identified High-Risk Commercial Facilities to develop and implement SWPPPs even if they are not otherwise required to have a SWPPP.
7. Within two years of permit issuance, develop and propose an ordinance to the UCC that would allow LFUCG to require an Industrial Facility or High-Risk Commercial Facility to develop and implement a stormwater monitoring program, including submittal of monitoring results, if LFUCG determines they have the potential to discharge pollutants in substantial amounts to the MS4. This monitoring program may be in addition to KPDES permit monitoring requirements.
8. Within one year of permit issuance, develop and propose an ordinance to the UCC that would require owners of privately-owned retention and detention basins and other privately-owned stormwater control structures to perform proper maintenance, cleaning, and repair on such structures.

Public Education and Outreach:

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality.

1. Have functional stormwater website within one year of permit issuance.

2. Annually evaluate and, if needed, revise the website content.
3. Create four press releases per year about the stormwater quality program beginning in Year 1. Stormwater quality program press releases will promote the stormwater website and programs requiring public involvement. Other press releases will be geared toward businesses, industries, and the development community.
4. Create email list within 12 months of permit issuance for people interested in knowing more about the stormwater quality program. The email list will be used to inform the public about changes to the Stormwater Quality Management Program. People will be able to sign up for the email list from the stormwater website, from mass emails sent to local contacts who already have an interest in environmental topics, and from public meetings or education/involvement event sign-in sheets.
5. The email list will be maintained and updated.
6. Develop one new video every two years for homeowners about pollution prevention and show it at least 4 times per year for two years at community functions or meetings. Attendance lists will be taken at the community functions or meetings. Evaluation forms related to the videos will be developed and used during the public viewings.
7. Conduct four presentations per year at community meetings. Presentations will include various components of the stormwater quality program and will be tailored to the specific audience.
8. Identify staff or groups who can conduct various training programs by the end of Year 1.
9. Conduct a training session for key employees, elected officials, and the business community once per year.
10. Develop survey forms to evaluate how well the target audience is being reached during the training programs within 12 months of permit issuance.

Public Involvement and Participation:

For all items, except 1 and 2, which fall to the Department of Administrative Services, the responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality.

1. Evaluate LEXCALL once per year to ensure that stormwater related calls are properly handled. See Appendix J for LEXCALL procedures.
2. Conduct one training session per year with LEXCALL staff regarding codes for stormwater related issues.
3. Semi-annually publish a newsletter about the SWQMP. The newsletter will be emailed to the email list created in PE-1 and to LFUCG Division Directors for disbursement to their staff. Content of the newsletter will include components of the program elements of the Stormwater Quality Management Program.
4. Have functional stormwater website within one year of permit issuance.
5. Participate in two civic groups related to water quality or watershed management.

6. Create email list within 12 months of permit issuance for people interested in knowing more about the stormwater quality program.
7. Facilitate four community activities per year that benefit water quality.
8. Mark 100 inlet structures per year. If volunteers do not complete 100 per year, LFUCG staff will complete this task.
9. Finalize storm drain marking protocol within 6 months of permit issuance. Include process for prioritizing inlet structures to maximize pollutant reduction.
10. Update storm drain marking map annually.
11. Finalize notification system for major programming changes within 12 months of permit issuance.
12. Form Stakeholder Advisory Committee within 12 months of permit issuance.

Illicit Discharge Detection and Elimination:

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality. This program does not apply outside the Urban Areas (except as associated with the industrial facilities program).

1. Complete review and update of current major outfall mapping and inventory by January 31, 2010. See Appendix G for the list of major outfalls.
2. Develop schedule and then field verify current major outfall mapping and inventory by January 31, 2010.
3. Develop procedure for updating the inventory by the end of Year 1.
4. Conduct desktop screening of storm sewersheds to prioritize likely areas of concern within 18 months of permit issuance.
5. Inspect the drainage system for illicit discharges by the end of the renewed MS4 KPDES permit cycle, beginning with high priority storm sewersheds. See Appendix W – IDDE Field Protocol Manual.
6. Complete and commence implementation by January 31, 2009, of procedures for conducting inspections and investigations when monitoring data, reported incidents, or other information indicate the likely existence of an illicit discharge. See Appendix W – IDDE Field Protocol Manual.
7. Commencing in calendar year 2008, conduct dry weather screening at no less than 125 locations every year, which may include major outfalls and other screening points selected by LFUCG. See Appendix D for the list of dry weather screening points and Appendix W for the IDDE Field Protocol Manual.
8. Commencing in calendar year 2008, conduct dry weather screening of identified major outfalls once every two years.
9. Conduct wet weather screening of major outfalls where appropriate based on results from the in-stream water quality monitoring program. See Measurable Goals 6 and 12.
10. Develop database to track the IDDE program by January 31, 2009.

11. Within one year of permit issuance, review and update the existing criteria to evaluate, for internal purposes, whether sampling results from screening activities indicate the potential existence of an illicit discharge. See Appendix W.
12. Develop procedures to identify potential remedies for confirmed illicit discharges and improper discharges within one year of permit issuance.
13. Evaluate sampling results for possible changes to the SWQMP once every two years.
14. Within 12 months of permit issuance, review and recommend improvements to the following enforcement procedures: Division of Water and Air Quality, Code Enforcement, Division of Engineering, DEEM, Fire & Emergency Services, and Health Department. See Appendix O for enforcement protocols, Appendix P for information on the Hearing Boards, and Appendix H for underground storage tank closure procedures.
15. Upon identification of the source of an illicit discharge or improper disposal, notify the responsible party within three days, if practical. Require the responsible party to eliminate the illicit discharge or improper disposal within 15 days of notification. If the responsible party cannot practically eliminate the illicit discharge or improper disposal within 15 days, require the party to submit a remedial plan and schedule, with an acceptable timeliness standard, to LFUCG for review and approval. Implementation of this measurable goal is contingent upon LFUCG having the authority to require responsible parties to complete eliminations of illicit discharges and improper disposals within 15 days. See LPCA Measurable Goals 2 and 5.
16. Finalize and begin implementation of spill response program within one year of permit issuance. See Appendix E for LFUCG's Procedures for Responding to Illicit Discharges and Spills and Environmental Compliance Policy and Appendix J for LEXCALL procedures.
17. Develop list of industries and businesses that are required to have a SWPPP within 12 months of permit issuance.
18. Have functional stormwater website within one year of permit issuance.
19. Develop list of employees who can provide training on prevention and control plans (SWPPPs) within one year of permit issuance.
20. Have two notifications (public service announcements or multimedia presentations) per year about illicit connections and improper waste disposal.
21. Identify staff and third party groups who are capable of providing training on IDDE by the end of Year 1.
22. Conduct one SWPPP development training session per year for the business community.
23. Commencing in calendar year 2008, conduct one training session regarding illicit discharge detection and elimination per year for employees carrying out LFUCG's IDDE program.
24. Develop survey forms to evaluate how well the target audience is being reached during the training programs within 12 months of permit issuance.
25. Within 30 days, where practical, conduct an investigation of reported, suspected illicit discharges due to sanitary sewer exfiltration or improper sanitary sewer connection to the MS4.

26. Upon identification of the source of an illicit discharge due to sanitary sewer exfiltration or improper sanitary sewer connection to the MS4, notify the responsible party as soon as practical. Require the responsible party to eliminate the illicit discharge within 15 days of notification. If the responsible party cannot practically eliminate the illicit discharge within 15 days, require the party to submit a remedial plan and schedule, with an acceptable timeliness standard, to LFUCG for review and approval. Implementation of this measurable goal is contingent upon LFUCG having the authority to require responsible parties to complete eliminations of illicit discharges within 15 days. See LPCA Measurable Goals 2 and 5.
27. By January 31, 2009, develop and commence implementation of a protocol for elimination of confirmed illicit discharges.

Construction Site Stormwater Runoff Control:

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality.

1. Conduct review of procedures related to water quality considerations in site planning by the end of Year 2. See Appendix K for the Environmental Routing Form, Appendix Q for applicable Subdivision Regulations, Appendix R for applicable Zoning Ordinances, and Appendix U for the Stormwater Manual. See Summary of Measurable Goals Attachment 1.
2. Conduct review of design criteria for stormwater quality controls in the Stormwater Manual and applicable ordinances within 2 years of permit issuance. See Appendix U and Appendix K. See Summary of Measurable Goals Attachment 1.
3. Review Kentucky's guides for BMPs and update the Stormwater Manual to reflect these guides by the end of Year 2. See Summary of Measurable Goals Attachment 1.
4. Develop example BMP plans and checklists for construction operators within one year of permit issuance.
5. By January 31, 2009, review construction site inspection and enforcement procedures and the existing inspection checklist and develop and commence implementation of revised procedures and checklist. Revised enforcement procedures shall provide for use of escalating enforcement remedies. Such procedures shall serve as a guide in LFUCG's enforcement program but shall not limit LFUCG's enforcement discretion in particular cases. See Appendix S for information on the construction site runoff control program, Appendix T for the Procedures Manual for Infrastructure Development, and Appendix O for Enforcement Protocols.
6. Commencing with the first full calendar month after entry of the Consent Decree, conduct monthly inspections of at least 90% of active construction sites with reasonable potential to discharge to the MS4.

7. Develop protocols for targeting active construction sites (e.g. complaints, topography, proximity to water bodies) for additional inspections.
8. By January 31, 2009, develop a database to track active construction sites, inspections, and enforcement actions.
9. Have functional stormwater website within one year of permit issuance.
10. Update copies of construction site BMP materials and make them available for distribution within one year of permit issuance.
11. Identify staff and third party groups who are capable of providing training on construction site runoff control by the end of Year 1.
12. Beginning in Year 2, conduct one training session per year for the construction community, including contractor construction site inspectors.
13. Conduct one training session regarding construction site stormwater runoff control per year for employees carrying out LFUCG's construction site stormwater runoff control program. After July 1, 2008, only inspections carried out by employees who have received such training will count as inspections meeting the requirements of Measurable Goal CS-6.
14. Develop survey forms to evaluate how well the target audience is being reached during the training programs within 12 months of permit issuance.
15. By January 31, 2009, develop and commence implementation of procedures for summary review of construction site erosion control plans to assess whether plans reasonably include measures that address potential water quality impacts from construction prior to authorization of land disturbance.

Pollution Prevention in Residential and Commercial Areas:

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality. This program does not apply outside the Urban Areas.

1. Conduct review of stormwater issues in the Comprehensive Plan as part of the 5-year update process. See Appendix II for the Draft 2006 Comprehensive Plan Element – Environmental and Green Infrastructure.
2. By January 31, 2010, review and update, as appropriate, with the goal of improving water quality in stormwater discharges from new development and redevelopment, engineering design standards, applicable sections of the Subdivision Regulations, and the procedures for reviewing development plans for compliance with stormwater management requirements, and reevaluate every three years thereafter. Consistent with the goal of improving water quality, in conducting the review and update, and successive reevaluations, LFUCG shall also have a goal of identifying and removing any legal impediments to, and facilitating the use of, "green infrastructure" alternatives to managing post-construction stormwater, such as infiltration, reuse, and evapotranspiration. See Appendix K for the Environmental Routing Form, Appendix L for Commercial Development Procedures and Water Quality BMPs, Appendix Q for the

- Subdivision Regulations, Appendix R for the Zoning Ordinances, and Appendix U for the Stormwater Manual. See Summary of Measurable Goals Attachment 1.
3. Develop low impact development guidelines for new development and re-development within three years of permit issuance.
 4. Update Greenway inventory within one year of permit issuance.
 5. Evaluate programs and procedures for maintenance of Greenways on public and private property within two years of permit issuance.
 6. By January 31, 2009, develop and propose an ordinance to the UCC that would require owners of privately-owned retention and detention basins and other privately-owned stormwater control structures to perform proper maintenance, cleaning, and repair on such structures.
 7. Within two years of permit issuance, evaluate programs and procedures for maintenance of post-construction stormwater quality controls on private residential and commercial property. See Appendix N for Detention Basin and Retention Pond Inspection Procedures and Appendix T for the Procedures Manual for Infrastructure Development. See Summary of Measurable Goals Attachment 2.
 8. Develop operation and maintenance guidelines for post-construction stormwater quality controls for use by private property owners within two years of permit issuance.
 9. By January 31, 2009, develop and commence implementation of a program to maintain publicly-owned or operated stormwater controls. Such program shall address publicly-owned or operated retention ponds, detention ponds, Stormceptors, catch basins, culvert inlets, and open channels. Such program shall provide for inspections in accordance with the inspection frequency outlined in Summary of Measurable Goals Attachment 2. Such program shall further provide for the scheduling and implementation of cleaning, maintenance, and repairs determined to be necessary during inspections.
 10. Commencing in calendar year 2009, annually update the inventory and map of post-construction stormwater controls, including detention basins, retention ponds, and stormwater quality treatment facilities. See Summary of Measurable Goals Attachment 2 for a list of stormwater controls to be mapped.
 11. Develop an inventory and a map of publicly-owned storm sewer pipes 18" and larger by the end of the renewed MS4 KPDES permit cycle. After this initial effort, the inventory and map will be updated annually.
 12. Develop an inspection schedule for the post-construction stormwater controls. The inspection schedule will be developed within one year of permit issuance. See Summary of Measurable Goals Attachment 2
 13. Develop procedures and checklists to facilitate inspections of post-construction stormwater controls within one year of permit issuance.
 14. Commencing with the first full calendar month after entry of the Consent Decree, ensure the inspection of at least 90% of the publicly- and privately-owned detention basins with reasonable potential to discharge pollutants to the MS4 at least two times a year. See Appendix M for the list of detention basins and retention ponds. See Summary of Measurable Goals Attachment 2.

15. Commencing with the first full calendar month after entry of the Consent Decree, ensure the inspection of at least 90% of the publicly- and privately-owned retention ponds with reasonable potential to discharge pollutants to the MS4 at least once a month. See Appendix M. See Summary of Measurable Goals Attachment 2.
16. Commencing with the first full calendar month after entry of the Consent Decree, ensure the inspection of at least 90% of the culverts in Appendix LL for clogging and excessive buildup of sediment at least once a month and within three days of a rainfall of 1 inch or more in a calendar day. See Appendix LL for the list of culverts cleaned by the Division of Streets, Roads, and Forestry. See Summary of Measurable Goals Attachment 2.
17. By January 31, 2009, based upon results of inspections, prepare a prioritized schedule for and perform necessary repairs, cleaning, and maintenance for those structures for which LFUCG is responsible. See Summary of Measurable Goals Attachment 2.
18. Based upon results of inspections, require responsible parties to perform necessary repairs, cleaning, and maintenance for those structures for which LFUCG is not responsible. See Summary of Measurable Goals Attachment 2.
19. Develop procedures to identify, prioritize, and monitor (water sampling) select post-construction stormwater quality controls within three years of permit issuance.
20. Recommend changes to inspection and enforcement procedures within two years of permit issuance. See Appendix O for the Enforcement Protocols and Appendix P for the Applicable Code of Ordinances.
21. Evaluate once per permit cycle the effectiveness of structural and source controls required by the LFUCG Stormwater Manual. See Appendix U.
22. Have functional stormwater website within one year of permit issuance.
23. Make available copies of materials about structural and source controls and the Operations and Maintenance Manual (referenced in PPMO) within two years of permit issuance.
24. After its development, periodically advertise the stormwater website on Channel 3.
25. Identify staff and third party groups who are capable of providing training on pollution prevention by the end of Year 1.
26. Conduct one training session per year for the public.
27. Develop survey forms to evaluate how well the target audience is being reached by the training programs within 12 months of permit issuance.
28. By January 31, 2010, develop and commence implementation of a program to require private owners of stormwater controls to conduct necessary maintenance, cleaning, and repairs of such controls. Such program shall address privately-owned retention ponds, detention basins, and other stormwater quality treatment facilities.

Pollution Prevention for Municipal Operations:

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality. This program does not apply outside the Urban Areas.

1. Update the general conditions section of the specifications for construction projects to ensure that contractors understand their obligations under local, state, and federal permits and stormwater pollution prevention requirements for capital, rehabilitation, and reconstruction projects by the end of Year 2. See Appendix S for components of the construction site runoff control program.
2. Update the general conditions section of the specifications for construction projects to ensure that contractors understand their obligations under local, state, and federal permits and stormwater pollution prevention requirements for flood management projects by the end of Year 2.
3. Develop, by the end of Year 1, criteria for prioritizing structures to be retrofitted.
4. Develop and begin implementation of a program to maintain stormwater quality controls on LFUCG property within one year of permit issuance. Include maintenance, cleaning, and repairs based on inspection findings. See Summary of Measurable Goals Attachment 2.
5. Develop a database of stormwater quality controls at municipal facilities within one year of permit issuance.
6. Review, update, and begin implementation of procedures for maintenance activities for LFUCG maintained streets and roads within one year of permit issuance. See Appendix LL for the list of culverts cleaned by the Division of Streets, Roads, and Forestry.
7. Review, update, and begin implementation of procedures for deicing operations within one year of permit issuance.
8. Review, update, and begin implementation of procedures for maintenance activities for facility grounds, rights-of-way, and drainage channels within one year of permit issuance. See Appendix Y for spill response procedures and groundwater protection plans for various municipal facilities, Appendix Z for LFUCG Building Maintenance and Construction Universal Waste Program Guidelines, and Appendices AA through HH for pollution prevention and SPCC plans for the wastewater treatment plants and pump stations.
9. Review, update, and begin implementation of procedures for materials and equipment storage within one year of permit issuance.
10. Review, update, and begin implementation of procedures for controls for the application of turf management chemicals within one year of permit issuance. See Appendix X for integrated pest management plans, spill response procedures, and groundwater protection plans for LFUCG golf courses and Appendix JJ for the Greenway Masterplan.
11. Formalize Operations and Maintenance Protocols within two years of permit issuance.
12. Develop an inspection schedule for known stormwater quality controls at LFUCG facilities by January 31, 2009, and commence implementation of the inspection schedule by January 31, 2010. See Summary of Measurable Goals Attachment 2.

13. Develop procedures and checklists to facilitate inspections of known stormwater quality controls within one year of permit issuance.
14. Inspect known stormwater quality controls at LFUCG facilities once during the renewed MS4 KPDES permit cycle or at the frequency specified in the inspection schedule. Schedule and perform any necessary maintenance, cleaning, or repairs based on results of inspections.
15. Develop procedures to identify, prioritize, and monitor (water sampling) select stormwater quality controls within one year of permit issuance. Begin implementation of procedures in Year 2.
16. Identify staff and third party groups who are capable of providing training on pollution prevention for municipal operations by the end of Year 1.
17. Conduct one training session per year for employees.
18. Develop survey forms to evaluate how well the target audience is being reached by the training programs within 12 months of permit issuance.

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality.

1. Update the inventory of Industrial Facilities with reasonable potential to discharge pollutants to the MS4 on an annual basis commencing January 31, 2009. See Appendix A for the Industrial Facility Inventory.
2. By January 31, 2009, develop a database to track relevant information, including enforcement and corrective action, regarding Industrial Facilities and High-Risk Commercial Facilities.
3. Compile an inventory of High-Risk Commercial Facilities by July 1, 2008. Update this inventory annually commencing in calendar year 2009. See Appendix C for the current list of Hazardous Waste Generators.
4. By July 1, 2009, develop and propose an ordinance to the UCC that would require regulated Industrial Facilities and locally identified High-Risk Commercial Facilities to develop and implement SWPPPs even if they are not otherwise required to have a SWPPP.
5. Within two years of permit issuance, develop a schedule and procedure to evaluate the SWPPPs of Industrial Facilities and municipal waste facilities. Develop checklists of items required in the SWPPPs and provide the checklists to Industrial Facilities for their use in SWPPP preparation.
6. Develop example SWPPPs for Industrial Facilities and High-Risk Commercial Facilities within one year of permit issuance. The example SWPPPs will include general and industry-specific BMPs that can be used by the industrial facilities.
7. By July 1, 2008, develop SWPPPs for any municipal waste facility that does not currently have one.
8. By the end of Year 3, develop procedures and schedules for requiring submittal of SWPPPs from locally identified High-Risk Commercial Facilities.

9. Develop procedures for conducting inspections of Industrial Facilities and municipal waste facilities within one year of permit issuance. See Appendix B for the Industrial Facility Inspection Form.
10. Inspect 90% of the Industrial Facilities with reasonable potential to discharge pollutants to the MS4 once every two years, commencing in calendar year 2009.
11. Inspect 20% of the High-Risk Commercial Facilities with reasonable potential to discharge pollutants to the MS4 each year, commencing in calendar year 2009.
12. By July 1, 2009, develop and propose an ordinance to the UCC that authorizes LFUCG to require Industrial Facilities and High-Risk Commercial Facilities with the potential to discharge pollutants in substantial amounts to the MS4 to develop and implement a stormwater monitoring program that includes providing the monitoring results to LFUCG.
13. Commencing in calendar year 2008, conduct wet weather outfall monitoring once per year at municipal waste facilities.
14. Commencing in calendar year 2009, conduct dry weather screening at 90% of large industrial outfalls of industrial facilities on the inventory once every two years.
15. Conduct major outfall wet weather screening where appropriate based on results from the in-stream water quality monitoring program.
16. Upon reissuance of the renewed MS4 KPDES permit, conduct representative outfall dry weather screening once per permit cycle.
17. Develop procedures for monitoring necessary to support enforcement actions upon release detection or failure to comply with required controls.
18. Review and recommend changes to LFUCG ordinances related to enforcement of controls within one year of permit issuance. See Appendix O for enforcement protocols and Appendix P for existing ordinances.
19. Have functional stormwater website within one year of permit issuance
20. Have copies of example SWPPPs available for distribution within one year of permit issuance.
21. Complete one presentation per year with the public about industrial monitoring.
22. Identify staff and third party groups who are capable of providing training on Industrial Facility pollution prevention by the end of Year 1.
23. Beginning in Year 2, conduct one workshop per year for Industrial Facilities and one workshop per year for High-Risk Commercial Facilities.
24. Conduct one training session per year for employees.
25. Develop survey forms to evaluate how well the target audience is being reached by the training programs within 12 months of permit issuance.
26. By July 1, 2009, develop and commence implementation of an Industrial and High-Risk Commercial Facility enforcement protocol for detecting and enforcing against violations of stormwater management requirements applicable to Industrial and High-Risk Commercial Facilities. The enforcement protocol shall provide for use of escalating enforcement remedies. Such protocol shall serve as a guide in LFUCG's enforcement program but shall not limit LFUCG's enforcement discretion in particular cases.

Water Quality Monitoring:

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality. See Appendix V for the water quality monitoring procedures and Appendix KK for the laboratory results.

1. Conduct Expansion Area 2 monitoring at select sites annually. Expansion Area 2 is the large area of land (>4,500 acres) added to the Urban Services Area on the east side of the city in the mid-1990s.
2. Conduct dry weather in-stream monitoring quarterly at 7 sites.
3. Conduct macroinvertebrate sampling annually at 7 sites.
4. Conduct fish sampling annually at 7 sites.
5. Conduct habitat assessments annually at 7 sites.
6. Conduct wet weather monitoring quarterly at 7 sites.
7. Begin pilot study of continuous monitoring in Year 2.
8. Update database of monitoring results annually.
9. Put monitoring data on the website annually.
10. Develop procedures to update the website on an ongoing basis within one year of permit issuance.
11. Complete calculations of seasonal pollutant loadings and event mean concentration estimates according to the following: Town Branch and Wolf Run in calendar year 2008, South Elkhorn in calendar year 2009, Cane Run and North Elkhorn in calendar year 2010, West Hickman in calendar year 2011, and East Hickman in calendar year 2012.
12. Identify staff and third party groups who are capable of providing training on water quality monitoring by the end of Year 1.
13. Beginning in Year 2, conduct one training session per year for citizens and/or employees involved in monitoring.
14. Complete survey forms by the end of Year 1.
15. Develop monitoring program evaluation protocol in Year 1.
16. Annually compare current year's data to prior year's data.
17. Conduct trend analysis in Year 5.

Reporting and Record Keeping:

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality.

1. Develop checklists for preparing the Annual Report within one year of permit issuance.
2. Develop the contents of the Annual Report within one year of permit issuance.
3. Complete the Annual Report each year in accordance with the schedule in the applicable MS4 KPDES permit.
4. Develop record keeping procedures within one year of permit issuance.

Summary of Measurable Goals Attachment 1
Stormwater Management Standards
for
New Development and Redevelopment

The stormwater management standards for new development and redevelopment are contained in the Stormwater Manual located on LFUCG's website. The manual is incorporated by reference into the Zoning Ordinance and Subdivision Regulations and contains design requirements and construction standards. Each chapter is briefly described below.

Chapter 1 contains water quality criteria for new development and redevelopment; mitigation for stream impacts; floodplain management standards; maintenance requirements; and erosion control requirements.

Chapter 2 contains permitting requirements of the LFUCG, KY Division of Water, U.S. Army Corps of Engineers, and FEMA.

Chapter 3 contains the standards for conducting watershed studies.

Chapter 4 describes the information that must be shown on design plans.

Chapter 5 contains the acceptable methods for conducting hydrologic analyses.

Chapter 6 contains design criteria for inlets, storm sewers, and manholes.

Chapter 7 contains design criteria for culverts.

Chapter 8 contains design criteria for open channels.

Chapter 9 contains methods for streambank stabilization and restoration.

Chapter 10 contains design criteria for bioretention, infiltration systems, filters, prefabricated treatment devices, detention ponds, extended detention ponds, wet ponds, and constructed wetlands.

Chapter 11 contains erosion and sediment control standards and design criteria.

Chapter 12 contains maintenance requirements of BMPs for LFUCG and commercial property owners.

Summary of Measurable Goals Attachment 2
Inspection Frequency for Stormwater Controls

| Stormwater Control | Inspection Frequency | | | | |
|---|-----------------------------------|----------|-------------------|---------|--|
| | As-Needed (Complaint Based) | Annually | Semi- Annually | Monthly | After each rainfall greater than 1 inch in a calendar day |
| Retention Ponds on public and private property (Appendix M), including those in Expansion Area 2 | | | | X | |
| Detention Basins on public and private property (Appendix M), including those in Expansion Area 2 | | | X | | |
| Stormceptors on Citation Boulevard | | X | | | |
| Low Priority catch basins, culvert inlets, and open channels on public property | X | | | | |
| Medium Priority catch basins, culvert inlets, and open channels on public property | | X | | | |
| High Priority catch basins, culvert inlets, and open channels on public property (see Appendix LL for current list of culverts) | | | | X | X |
| Stormwater quality treatment facilities on public and private property | | X | | | |

Notes:

1. LFUCG will conduct an initial inspection of publicly (LFUCG) owned catch basins, culvert inlets, and open channels in the urban areas during the first permit cycle. The definitions for low, medium, and high priority are given below:
 - High Priority – Areas that consistently generate a large volume of trash and/ or debris.
 - Medium Priority – Areas that consistently generate a moderate volume of trash and/ or debris.
 - Low Priority – Areas that generate a low volume of trash and/ or debris.
2. Catch basins include curb inlets and surface inlets.

SWQMP Evaluation

The SWQMP establishes numerous measurable goals that demonstrate LFUCG's commitment to implementing an effective stormwater quality program. The measurable goals were developed after reviewing other programs across the nation and by reviewing the recently published EPA document entitled MS4 Program Evaluation Guidance (January, 2007). The ultimate goal of the SWQMP is to improve the water quality of the streams in Fayette County and prevent impacts from stormwater discharges from the MS4.

Periodic evaluation of the SWQMP is necessary to ensure ongoing improvement of the stormwater quality programs. In addition, the stormwater permit issued to LFUCG requires that each program element be evaluated for its effectiveness. LFUCG intends to conduct an annual evaluation of the program to:

1. ensure compliance with the stormwater permit
2. obtain feedback to identify the strengths and weakness of the programs
3. ensure that public funds are being spent wisely toward reducing pollution in stormwater discharges from the MS4

As noted in the EPA MS4 Program Evaluation Guidance (January 2007), "evaluations not only demonstrate progress, but also allow the permittee to adjust programming, funding, or staffing levels for the upcoming year to best use existing resources to maximize water quality benefit." The MS4 Guidance lists the following six levels of stormwater program outcomes:

Levels of Stormwater Management Program Outcomes

| |
|---|
| 1. Compliance with activity-based permit requirements |
| 2. Changes in attitudes, knowledge, and awareness |
| 3. Behavioral change and BMP implementation |
| 4. Pollutant load reductions |
| 5. Changes in urban runoff and discharge quality |
| 6. Changes in receiving water quality |

The MS4 Guidance goes on to state the following:

“Stormwater program managers may strive to achieve some or all of these outcomes; however, in general the “implementation outcomes” (1, 2, and 3 above) typically are easier to measure than the more complex goals of reducing loading and achieving changes in discharge and receiving water quality. In addition, these outcome levels are not independent of one another; the hope is that movement towards one will result in progress towards achieving another.”

The method used to evaluate the program elements of the SWQMP will consist of assessing whether the “measurable goals” within each program element have been met. The “measurable goals” consist of clearly defined tasks and schedules. The SWQMP includes a total of 167 measurable goals among eleven program elements as shown in the table below.

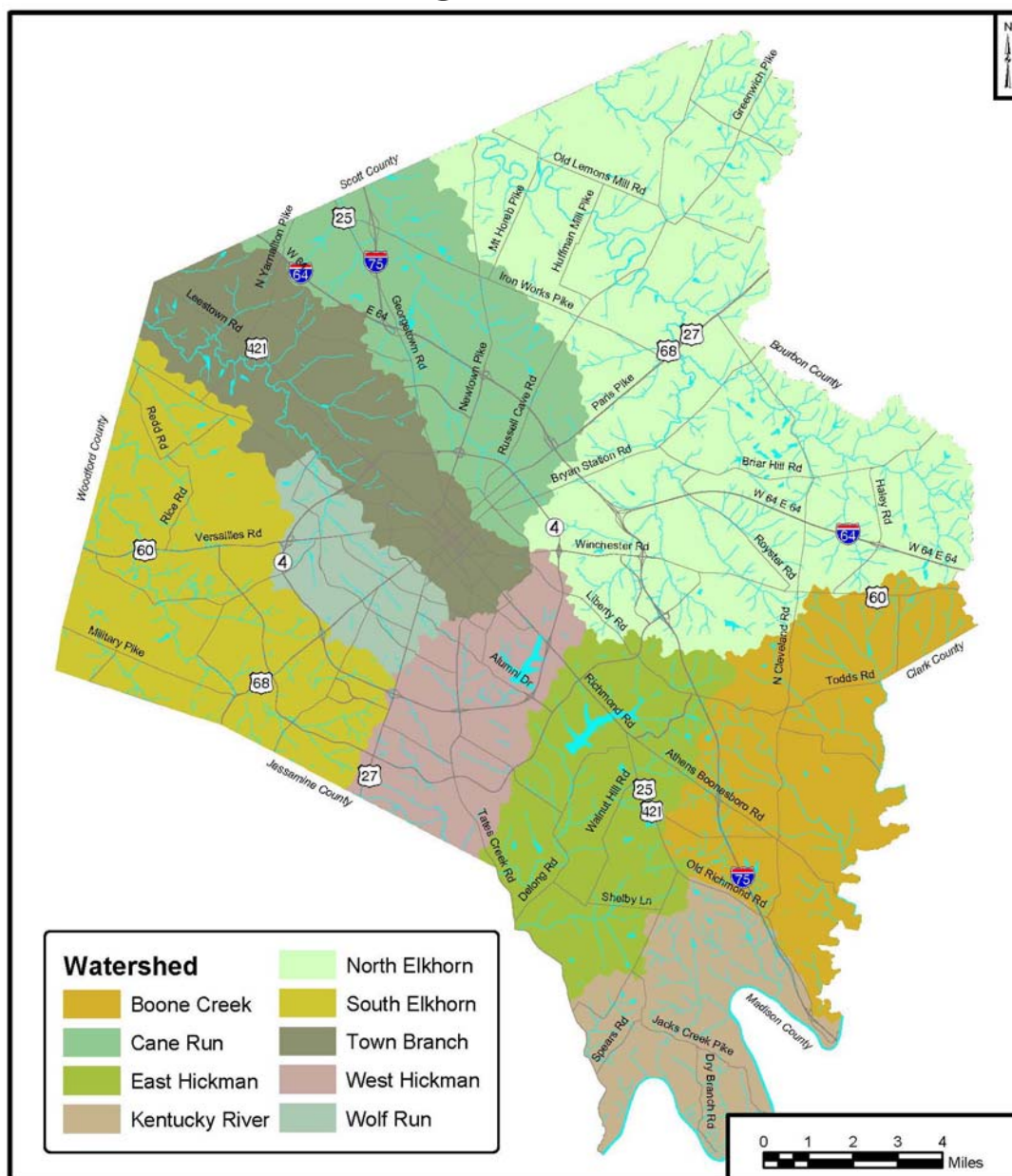
Measurable Goals

| Program Element | No. of Measurable Goals |
|--|-------------------------|
| 1. Watershed Management | 2 |
| 2. Legal Authority | 8 |
| 3. Public Education | 10 |
| 4. Public Involvement | 12 |
| 5. Illicit Discharge Detection and Elimination | 27 |
| 6. Construction Site Runoff | 15 |
| 7. Pollution Prevention for Residential and Commercial Areas | 28 |
| 8. Pollution Prevention for Municipal Operations | 18 |
| 9. Industrial Facility Pollution Prevention | 26 |
| 10. Water Quality Monitoring | 17 |
| 11. Recordkeeping | 4 |
| Total | 167 |

Third Party Audit

The LFUCG intends to have a third party conduct an audit of the stormwater program in Year 5 of the renewed MS4 KPDES permit. The purpose of the audit will be to identify deficiencies and make specific recommendations for improvement.

Watershed Management



Watershed Management

1. Overview

The objective will be to develop a watershed assessment report for each of the major watersheds as a means for guiding stormwater management activities. The report will identify and describe the current activities associated with each of the following:

- Greenways
- Stream restoration efforts
- TMDLs
- Floodplain conservation
- Water quality and biological monitoring
- Maintenance (including planting and mowing)
- Detention basins and retention ponds
- Pollutants of concern
- Stakeholders
- 319 Grants
- Stormwater design and construction projects

2. KPDES Permit Requirements

None

3. Element Task, Frequency, and Responsible Party

See Table WM-1

4. Procedures

The responsible parties within LFUCG will be the Department of Public Works and Development and/or the Department of Environmental Quality.

5. Documentation

- Develop watershed management assessment reports
- Document meetings

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table WM-1 Watershed Management

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>Develop a watershed assessment report for each of the major watersheds as a means for guiding stormwater management activities. The report will identify and describe the current activities associated with each of the following:</p> <ul style="list-style-type: none"> • Greenways • Stream restoration efforts • TMDLs • Floodplain conservation • Water quality and biological monitoring • Maintenance (including planting and mowing) • Detention basins and retention ponds • Pollutants of concern • Stakeholders • 319 Grants • Stormwater design and construction projects | <p>1. Within 12 months of permit issuance, develop a report format for watershed assessment reports.</p> <p>2. By the end of the permit cycle, a watershed assessment report will have been written for each of the major watersheds according to the following schedule: Year 2 – Town Branch and Wolf Run, Year 3 – South Elkhorn, Year 4 – Cane Run and North Elkhorn, Year 5 – West Hickman and East Hickman.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Legal Prohibition and Control Authority



Lexington Fayette Urban County Government

DEPARTMENT OF PUBLIC WORKS

NOTICE OF VIOLATION

DATE: _____

RE: PROPERTY _____

DATE & TIME OF OFFENSE _____

You are hereby given notice that the violations cited below must be abated within _____ calendar days of the date of this notice. Failure to correct the violations within the time period specified will result in a civil citation and a civil penalty.



Lexington Fayette Urban County Government

DEPARTMENT OF PUBLIC WORKS

Civil Citation And Assessment of Civil Penalty

Citation Number _____

DATE: _____

RE: PROPERTY _____

DATE & TIME OF OFFENSE _____

You are hereby directed to pay the civil penalty stated below for:

Legal Prohibition and Control Authority

The goal of this section is to establish effective legal prohibition and control authority regarding stormwater pollution prevention. Pollution is to be prevented from going **to** the storm sewer system from various land uses and activities. Furthermore, pollution is to be prevented **from** being released by the storm sewer system into the waters of the Commonwealth of Kentucky and the United States. This section describes the process by which LFUCG will review and update existing ordinances necessary for an effective stormwater quality management program.

The Legal Prohibition and Control Authority section combines the first section of the following program elements elsewhere in this document: Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff Control, Pollution Prevention in Residential and Commercial Areas, Pollution Prevention from Municipal Operations, and Industrial Facility and Municipal Waste Facility Pollution Prevention.

The overview and draft KPDES Permit requirements from the five program elements related to Legal Prohibition and Control Authority are included below. There is a common set of Procedures, Documentation, and Table.

Illicit Discharge Detection and Elimination

1.0 Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2.0 KPDES Permit Requirement

“The permittee shall effectively establish by ordinance, regulation, permit or series of contracts which authorizes or enables the permittee to control,

prevent, reduce, and eliminate pollutants from discharges of stormwater to the MS4.”

“Illicit Discharges - Effectively prohibit, through ordinance, operational procedures, or other regulatory means, non-exempt, non-stormwater discharges into the MS4.”

“Improper Disposals - Control through ordinance, operational procedures, or other regulatory means the discharge to the MS4 of spills, dumping or disposal of materials other than stormwater.”

Construction Site Stormwater Runoff Control

1.0 Overview

“The objective is to develop, implement, and enforce programs to minimize pollutants in stormwater runoff from construction sites to the municipal separate storm sewer system (MS4).”

2.0 KPDES Permit Requirement

“The permittee shall effectively establish by ordinance, regulation, permit or series of contracts the authority to control pollutants in discharges of stormwater runoff from construction sites addressed in 40 CFR 122.26(d)(2)(A) to the MS4. [Furthermore, refer to Table 3., Illicit Discharge Detection and Elimination for the control authority and prohibition of non-exempt, non-stormwater discharges; spills; dumping; or disposal of materials other than stormwater into the MS4.]”

Pollution Prevention in Residential and Commercial Areas and Pollution Prevention from Municipal Operations

1.0 Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

2.0 KPDES Permit Requirement

“Refer to Table 3., Illicit Discharge Detection and Elimination for the control authority and prohibition of the permittee of non-exempt, non-stormwater discharges; spills; dumping; or disposal of materials other than stormwater into the MS4.”

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

1.0 Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2.0 KPDES Permit Requirement

“The permittee shall control through ordinance, regulations, permit, operational procedures, or other regulatory means, the contribution of pollutants to the MS4 by stormwater discharges associated with industrial activity (as defined in 40 CFR 122.26(b)) and the quality of stormwater discharged from sites of industrial activity. Control authority shall also extend to stormwater discharges from operating or closed municipal landfills or other treatment, storage, or disposal facilities for municipal wastes. [Furthermore, refer to Table 3., Illicit Discharge Detection and Elimination for the control authority and prohibition of non-exempt, non-stormwater discharges; spills; dumping; or disposal of materials other than stormwater into the MS4.]”

3. Element Task, Frequency, and Responsible Party

See Table LPCA-1

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for recommending changes to existing

ordinances. The Department of Law will be responsible for preparing the revised ordinances and submitting them to the UCC for passage and adoption. The purpose of this task is to:

- Identify legal deficiencies that impair LFUCG's ability to meet permit requirements.
- Identify and clarify areas of overlap and duplication.
- Clearly define the criteria for determining which land uses and activities have the potential to be a significant contributor of pollutants to the MS4.

The procedures listed above will be repeated once per permit cycle to determine if further code revision is necessary to provide effective legal prohibition and control authority over illicit discharges, industries, pollution prevention on private property, and construction site runoff control.

Existing ordinances relating to stormwater quality are contained in Appendix P.

5. Documentation

- Keep minutes of meetings related to legal prohibition and control authority deficiencies and proposed code revisions.
- Keep copies of the UCC proceedings related to the hearing and adoption of these code revisions.
- Document changes made to the municipal code, regulations, procedures, or manuals.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table LPCA-1 – Legal Prohibition and Control Authority

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|---|
| Conduct an ordinance review and propose changes for the UCC's consideration that would consolidate and address overlap of responsibilities related to stormwater pollution prevention. | 1. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality and Department of Law |
| Propose ordinance revisions for the UCC's consideration that would streamline enforcement procedures and include escalating remedies for addressing MS4 violations. | 2. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality and Department of Law |
| Develop and propose ordinance changes for the UCC's consideration to obtain authority to assess maximum penalties of at least \$10,000 per day, for violations related to the illicit discharge program, industrial program, or construction site program. | 3. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality and Department of Law |
| Develop and propose ordinance changes for the UCC's consideration to obtain authority to issue stop-work orders on construction sites for MS4 program discharge and BMP violations without first appearing before a judge. | 4. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality and Department of Law |
| Develop and propose ordinance changes for the UCC's consideration to obtain authority to order responsible parties to take action to eliminate confirmed illicit discharges without first appearing before a judge. | 5. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality and Department of Law |
| Develop and propose an ordinance to the UCC that would require regulated Industrial Facilities and locally identified High-Risk Commercial Facilities to develop and implement SWPPPs even if they are not otherwise required to have a SWPPP. | 6. Complete within two years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality and Department of Law |

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|---|--|---|
| Develop and propose an ordinance to the UCC that would allow LFUCG to require an Industrial Facility or High-Risk Commercial Facility to develop and implement a stormwater monitoring program, including submittal of monitoring results, if LFUCG determines they have the potential to discharge pollutants in substantial amounts to the MS4. This monitoring program may be in addition to KPDES permit monitoring requirements. | 7. Complete within two years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality and Department of Law |
| Develop and propose an ordinance to the UCC that would require owners of privately-owned retention and detention basins and other privately-owned stormwater control structures to perform proper maintenance, cleaning, and repair on such structures. | 8. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality and Department of Law |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Public Education and Outreach

PE-1 General Public and Stakeholder Education Program

PE-2 Community Meetings

PE-3 Stormwater Pollution Prevention and Watershed
Management Training

PE-4 Reporting and Record Keeping



Public Education and Outreach

PE-1 General Public and Stakeholder Education Program

1. Overview

“The objective is to increase public awareness of water quality issues associated with discharges from the municipal separate storm sewer system (MS4) and to promote stewardship of the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall maintain an education program to foster stewardship of the water resources of Fayette County due to discharges from the MS4. This plan shall be evaluated each year for measures of success to determine effectiveness of the plan.

“Educational materials, public service announcements, and/or multimedia presentations shall be made available for homeowners and property owners related to point and non-point source pollution, household hazardous waste, and proper lawn care practices.

“Educational materials and/or multimedia presentations shall be made available for appropriate area businesses related to point and non-point source pollution and stormwater pollution prevention measures for grounds maintenance and operational procedures.

“Educational materials and/or multimedia presentations shall be made available for the construction industry related to point and non-point source pollution and stormwater pollution prevention measures for operational procedures and erosion and sediment controls.

“Educational materials and/or multimedia presentations shall be made available for public institutions related to point and non-point source pollution and stormwater pollution prevention for erosion and sediment controls, grounds maintenance, capital construction projects, and institutional educational and operational programming.”

3. Element Task, Frequency, and Responsible Party

See Table PE-1

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for publicizing the stormwater management program and for educating the public about the program and how they can become involved in its implementation. Other LFUCG departments will be involved in assisting Public Works and/or Environmental Quality in this task.

5. Documentation

- Record the number of website hits.
- Record the number of downloads of pdf documents (brochures).
- Track number of brochures made available at various distribution points.
- Retain copies of press releases for inclusion in the Annual Report.
- Record the number of stormwater-related videos shown on Channel 3.
- Keep a copy of the email distribution list and copies of emails sent to the list members.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PE-1 – General Public and Stakeholder Education Program

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>General Public</p> <ul style="list-style-type: none"> • Develop a new section of the LFUCG website devoted to stormwater issues and impaired streams (see Appendix I) • Develop press releases to newspapers and T.V./radio stations about the water quality program and website. Include copies in the Annual Report. • Publicize the website on Channel 3. • Create a list of email addresses of people who want to be included in mass mailings regarding the stormwater program. The public will be able to sign up for this list on the website. | <ol style="list-style-type: none"> 1. Have functional stormwater website within one year of permit issuance. 2. Annually evaluate and, if needed, revise the website content. 3. Create four press releases per year beginning in Year 1. Stormwater quality program press releases will promote the stormwater website and programs requiring public involvement. Other press releases will be geared toward businesses, industries, and the development community. 4. Create email list within 12 months of permit issuance for people interested in knowing more about the stormwater quality program. The email list will be used to inform the public about changes to the Stormwater Quality Management Program. People will be able to sign up for the email list from the stormwater website, from mass emails sent to local contacts who already have an interest in environmental topics, and from public meetings or education/involvement event sign-in sheets. | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

LFUCG Stormwater Quality Management Program

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| | 5. The email list will be maintained and updated. | |
| <p>Homeowners</p> <ul style="list-style-type: none"> Develop a new section of the LFUCG website devoted to stormwater issues with a "Homeowner" link to educational materials (will be based on those already developed by LFUCG, EPA, KDOW, Center for Watershed Protection, etc.). Provide links to Annual Reports and KPDES permits (stormwater, WWTPs). Develop videos to be aired on Channel 3 regarding the stormwater program. | <p>1. Have functional stormwater website within one year of permit issuance.</p> <p>6. Develop one new video every two years for homeowners about pollution prevention and show it at least four times a year for two years. Attendance lists will be taken at the community functions or meetings. Evaluation forms related to the videos will be developed and used during the public viewings.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Businesses</p> <ul style="list-style-type: none"> Develop a new section of the LFUCG website devoted to stormwater issues with a "Business" link to educational materials developed by others. | <p>1. Have functional stormwater website within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

LFUCG Stormwater Quality Management Program

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|--|--|--|
| <p>Construction Industry</p> <ul style="list-style-type: none"> • Develop a new section of the LFUCG website devoted to stormwater issues with a “Construction Industry” link to applicable web sites. • Evaluate available educational materials for distribution, include the following: <ul style="list-style-type: none"> ○ Information on management of privately-owned detention and retention basins ○ Erosion control requirements for homebuilders ○ EPA publications • Identify locations for distribution of printed materials, such as: <ul style="list-style-type: none"> ○ Homebuilders Association of Lexington ○ Local offices of construction trade planrooms | <p>1. Have functional stormwater website within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Public Institutions</p> <ul style="list-style-type: none"> • Develop a new section of the LFUCG website devoted to stormwater issues with a “Public Institutions” link to applicable web sites. | <p>1. Have functional stormwater website within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Public Education and Outreach PE-2 – Community Meetings

1. Overview

“The objective is to increase public awareness of water quality issues associated with discharges from the municipal separate storm sewer system (MS4) and to promote stewardship of the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirements

“The permittee shall conduct, facilitate, and participate in meetings held throughout the community to promote stewardship of the water resources of Fayette County associated with discharges from the MS4.

“Conduct, facilitate, and/or participate in meetings of the public, boards of directors for community civic groups, governing councils, neighborhoods, public task forces, planning and zoning commissions, and/or civic groups.”

3. Element Task, Frequency, and Responsible Party

See Table PE-2

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for speaking at community meetings about the stormwater management program. Other LFUCG departments or third party groups may be involved in conducting or facilitating these meetings.

5. Documentation

- Keep copies of presentations, showing revisions as they are made.
- Keep copies of the distribution list of public groups contacted regarding the availability of speakers on water quality topics.

- Keep track of the number of public meetings conducted, including copies of agendas, lists of attendees, audience surveys, etc.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PE-2 – Community Meetings

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|--|
| <p>Conduct, facilitate, or participate in at least one presentation quarterly with the public. Examples may include:</p> <ul style="list-style-type: none"> Fayette County Neighborhood Council Individual neighborhood associations Lexington - Fayette Co. Environmental Commission Planning Commission Friends of Wolf Run Friends of Cane Run Kentucky River Watershed Watch Garden Clubs Home Builders Association of Lexington Industrial Organizations Professional Groups Academic Community Construction Industry <p>Develop presentations to include various components of the stormwater quality program and tailored to specific audiences.</p> <p>Develop audience surveys to measure attendance and evaluate the extent to which the target audience is being reached and ways to expand the audience reached.</p> <p>Develop LFUCG water quality program speaker list.</p> <p>Notify community groups about LFUCG water quality program speaker list and program offerings.</p> | <p>7. Conduct four presentations per year at community meetings.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Public Education and Outreach

PE-3 – Stormwater Pollution Prevention & Watershed Management Training

1. Overview

“The objective is to increase public awareness of water quality issues associated with discharges from the municipal separate storm sewer system (MS4) and to promote stewardship of the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall conduct, facilitate, and participate in training activities that promote stewardship of the water resources of Fayette County through presentations on the sources, impacts and solutions of stormwater pollution associated with discharges from the MS4. Training activities will be a part of other programs such as illicit discharge detection and elimination and construction activities.

“Conduct, facilitate, and participate in training activities for the academic community.

“Conduct training classes for appropriate employees on the sources, impacts, and solutions of stormwater pollution.

“Participate in community training activities to promote water resource stewardship and the reduction of stormwater pollution. Potential opportunities would include Kentucky River Watershed Watch, The Master Gardner Program, etc.

“Conduct land use and watershed management training activities on the sources, impacts, and potential solutions of stormwater pollution.

“Conduct, facilitate, and participate in technical training activities for appropriate businesses and industries. Training to provide assistance in understanding LFUCG water quality regulations, construction and development plan submittals, and proper stormwater management and pollution prevention.”

3. Element Task, Frequency, and Responsible Party

See Table PE-3

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for conducting training related to the stormwater management program. Other LFUCG departments or third party groups may be involved in conducting or facilitating the training sessions.

5. Documentation

- Keep copies of training modules and presentations, showing revisions as they are made.
- Keep track of the number of training activities conducted, including copies of agendas, lists of attendees, etc.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PE-3 – Stormwater Pollution Prevention & Watershed Management Training

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|---|
| Identify staff and third party groups who are capable of providing training on the promotion of water resource stewardship through presentations on the sources, impacts, and solutions of stormwater pollution. | 8. Complete by end of Year 1. | Department of Public Works and Development and/or Department of Environmental Quality |
| Classroom Training <ul style="list-style-type: none"> Conduct, facilitate, and participate in training activities for K-12 schools and universities. | | Department of Public Works and Development and/or Department of Environmental Quality |
| Employee Training <ul style="list-style-type: none"> Conduct, facilitate, and participate in training activities to be conducted annually for key LFUCG employees. Target training to specific classes of employees. | 9. One training session per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| Community Training Opportunities <ul style="list-style-type: none"> Participate in training activities for community groups, such as Kentucky River Watershed Watch and Master Gardener Program. | | Department of Public Works and Development and/or Department of Environmental Quality |
| Elected Officials and Development Community <ul style="list-style-type: none"> Conduct workshops on land use and watershed management training activities annually for the UCC and Planning Commission. Continue partnering workshops held each year for the development community. | 9. One training session per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| Business Community (Commercial and Industrial) <ul style="list-style-type: none"> Conduct, facilitate, and participate in workshops conducted each year for the following: <ul style="list-style-type: none"> Construction industry regarding construction site runoff control. Commercial and industrial businesses regarding pollution prevention measures for commercial and industrial sites. | 9. One training session per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop audience surveys to measure attendance and evaluate the extent to which the target audience is being reached and ways to expand the audience reached. | 10. Complete survey forms within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

LFUCG Stormwater Quality Management Program

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Public Education and Outreach
PE-4 – Reporting and Record Keeping

(see Reporting and Record Keeping section)

Public Involvement and Participation

PI-1 Central Reporting of Pollution or Hazards

PI-2 Support Civic Groups Involved in Watershed Management and Stormwater Pollution Prevention

PI-3 Facilitate Volunteer Service Opportunities for the Public

PI-4 Storm Drain Marking Program

PI-5 Public Notification of Major Program Changes

PI-6 Stakeholder Advisory Committee

PI-7 Reporting & Record Keeping



Public Involvement and Participation

PI-1 – Central Reporting of Pollution or Hazards

1. Overview

“The objective is to increase public involvement in the management of the stormwater pollution prevention programs of Fayette County associated with discharges from the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall provide a central reporting "hotline" for citizens and employees of the permittee for issues related to stormwater pollution prevention. Maintain "hotline" and internet communication channels for use by the public and permittee employees to report complaints, spills, and illegal dumping. These channels of communication shall be available for people to volunteer for community watershed related events and speak with environmentally related staff.”

3. Element Task, Frequency, and Responsible Party

See Table PI-1

4. Procedures

The Department of Administrative Services will be responsible for implementing and maintaining the LEXCALL system for reporting of water quality related issues, as a tool for registering volunteers for stormwater activities, and for speaking with environmental staff. Other LFUCG departments, including Public Works and Development and/or Environmental Quality, will be involved in assisting Administrative Services in this task.

LEXCALL procedures are contained in Appendix J.

5. Documentation

- Maintain records of all incoming LEXCALL inquiries and document their follow-up and resolution.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PI-1 – Central Reporting of Pollution or Hazards Program

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Continue operation of LEXCALL (via phone and website) to include the following:</p> <ul style="list-style-type: none"> ○ Reporting of spills ○ Reporting of illegal dumping/activity ○ Reporting of complaints ○ Signing up for volunteer activities <p>Evaluate the LEXCALL records to make sure that all water quality and stormwater related calls are properly handled, including being tracked and reported. This will involve coordination between LEXCALL staff and Department of Public Works and Development and/or Department of Environmental Quality staff to ensure that calls are being forwarded to the appropriate Divisions for follow-up and resolution.</p> <p>Publish the LEXCALL phone number and website address on all stormwater educational materials.</p> | <p>1. Evaluate LEXCALL once per year.</p> | <p>Department of Administrative Services</p> |
| <p>The importance of water quality issues will be emphasized with LEXCALL staff during training associated with PE-3. Codes for stormwater related issues will be stressed.</p> | <p>2. Conduct one training session per year.</p> | <p>Department of Administrative Services</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Public Involvement and Participation

PI-2 – Support Civic Groups Involved in Watershed Management and Stormwater Pollution Prevention

1. Overview

“The objective is to increase public involvement in the management of the stormwater pollution prevention programs of Fayette County associated with discharges from the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirements

“The permittee shall provide opportunities for community groups and organizations whose goals are water resource protection, watershed management and stormwater pollution prevention, to review program activities and developments.”

3. Element Task, Frequency, and Responsible Party

See Table PI-2

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for publicizing the stormwater management program and supporting civic groups involved in watershed management and stormwater pollution prevention. Other LFUCG departments, including the Department of Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of newsletters.
- Keep updated list of community groups and individuals interested in stormwater quality.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PI-2 – Support Civic Groups Involved in Watershed Management and Stormwater Pollution Prevention

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|---|
| Develop a newsletter about the SWQMP activities. The newsletter will be emailed to the email list created in PE-1 and to LFUCG Division Directors for disbursement to their staff. Content of the newsletter will include components of the program elements of the Stormwater Quality Management Program. | 3. Publish semi-annually. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop website devoted to stormwater management (see PE-1). | 4. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Participate in and support civic groups that focus on water quality or watershed management, e.g. Kentucky River Watershed Watch. | 5. Participate in at least 2 groups. | Department of Public Works and Development and/or Department of Environmental Quality |
| Create and maintain an email list for people interested in knowing more about the stormwater quality program. | 6. Create email list within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Public Involvement and Participation

PI-3 – Facilitate Volunteer Service Opportunities for the Public

1. Overview

“The objective is to increase public involvement in the management of the stormwater pollution prevention programs of Fayette County associated with discharges from the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall facilitate opportunities for the public to volunteer time and resources in community activities to reduce and prevent stormwater pollution. Activities may include clean-ups, volunteer sampling, and planting of native vegetation.”

3. Element Task, Frequency, and Responsible Party

See Table PI-3

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for planning and executing volunteer opportunities for the public related to improving stormwater quality. Other LFUCG departments, including Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep track of the numbers of volunteers who participate.
- Keep track of monetary or in-kind donations made.
- Keep survey responses.
- Keep copies of press releases or other advertising copy used to generate interest in the activities.

- Keep copies of results and outcomes of the activities.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PI-3 – Facilitate Volunteer Service Opportunities for the Public

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|--|
| <p>Facilitate four community activities per year that benefit water quality and that the public can volunteer their time or resources to completing. These may include the following:</p> <ul style="list-style-type: none"> • Reforest The Bluegrass • The RENEW project • The Great American Clean-Up • Kentucky River Clean Sweep • citizen stormwater monitoring • citizen creek assessments • others <p>Develop surveys that volunteers can complete at the conclusion of their activity or efforts.</p> <p>Promote the activities via press releases, Channel 3, and website.</p> <p>Post results and outcomes to the website.</p> | <p>7. Facilitate four community activities per year.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Public Involvement and Participation

PI-4 – Storm Drain Marking Program

1. Overview

“The objective is to increase public involvement in the management of the stormwater pollution prevention programs of Fayette County associated with discharges from the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall facilitate volunteer activities that educate the public on stormwater management and improper disposal of wastes into the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table PI-4

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for planning and executing the storm drain marking program. Other LFUCG departments, including Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep a copy of the written protocols, including updates.
- Keep copies of press releases or other advertisement copy.
- Keep track of the number of medallions placed and stenciled designs spray painted.
- Keep track of the number of volunteers who participated each year.
- Keep track of hours and names of staff who work on the marking program.
- Keep copies of survey responses.
- Keep a copy of the map, including annual updates.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PI-4 – Storm Drain Marking Program

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|--|
| <p>Continue “Operation Upstream” to label storm drain inlet structures.</p> <p>Seek volunteers for this program. Targeted groups may include the following:</p> <ul style="list-style-type: none"> ○ Neighborhood associations ○ Civic groups ○ Boy Scout and Girl Scout Troops ○ High school volunteer organizations ○ Garden clubs <p>Have the public complete surveys at the conclusion of their volunteer efforts.</p> <p>If volunteers do not complete 100 per year, LFUCG staff will complete this task.</p> | <p>8. Mark 100 inlet structures per year.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Finalize storm drain marking protocol for medallion placement and stencil locations that can be provided to volunteers.</p> <p>Include process for prioritizing inlet structures to maximize pollutant reduction.</p> | <p>9. Finalize protocol within 6 months of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Create a map showing locations of all currently marked drains and those to be marked.</p> <p>Post results and map on the website.</p> | <p>10. Update map annually.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Public Involvement and Participation

PI-5 – Public Notification of Major Program Changes

1. Overview

“The objective is to increase public involvement in the management of the stormwater pollution prevention programs of Fayette County associated with discharges from the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall notify the public and affected stakeholders of any proposed major program changes that will significantly impact stormwater runoff quality, negatively or positively. The public shall be given the opportunity to informally comment on proposed changes through webpage notices.”

3. Element Task, Frequency, and Responsible Party

See Table PI-5

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for notifying the public about major program changes. Other LFUCG departments, including Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Document the protocol for public notification, including updates.
- Document all proposed changes and comments received.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PI-5 – Public Notification of Major Program Changes

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Develop a system to notify the public of proposed major programming changes. Include the following methods:</p> <ul style="list-style-type: none"> • Posting on the website • Announcement on Channel 3 • Email community groups and individuals <p>Provide an opportunity for the public to comment on the proposed changes.</p> <p>Summarize public comments and make them available on the website.</p> | <p>11. Finalize notification system within 12 months of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Public Involvement and Participation

PI-6 – Stakeholder Advisory Committee

1. Overview

“The objective is to increase public involvement in the management of the stormwater pollution prevention programs of Fayette County associated with discharges from the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall facilitate the formation of a standing community stakeholder advisory committee to allow for the discussion of issues related to watershed management, stormwater pollution prevention, and the management plans of the permittee associated with discharges from the MS4. The advisory committee may include members of the public, appropriate employees of the permittee, and members of the regulated commercial, industrial, development, and construction communities.”

3. Element Task, Frequency, and Responsible Party

See Table PI-6

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for the formation of the Stakeholder Advisory Committee. Other LFUCG departments, including Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Document the mission of the Stakeholder Advisory Committee, including any updates or changes.

- Document methods used to advertise the formation of the Stakeholder Advisory Committee and the membership drive.
- Compile meeting minutes to document progress of the committee.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PI-6 – Stakeholder Advisory Committee

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|---|
| Define the mission of the Stakeholder Advisory Committee. Determine its standing and structure within the LFUCG. | 12. Form committee within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Create a Stakeholder Advisory Committee. | 12. Form committee within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Publicize the creation of the committee via the following: <ul style="list-style-type: none"> ○ Press release ○ Announcement on Channel 3 | 12. Form committee within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Public Involvement and Participation PI-7 – Reporting and Record Keeping

(see Reporting and Record Keeping section)

Illicit Discharge Detection and Elimination

IDDE-1 Legal Prohibition/Control Authority

IDDE-2 Inventory & Inspection

IDDE-3 Monitoring

IDDE-4 Investigation

IDDE-5 Evaluation

IDDE-6 Enforcement of Controls

IDDE-7 Response to Spills

IDDE-8 Prevention and Control Plans

IDDE-9 Education

IDDE-10 Training

IDDE-11 Controls for Sanitary Sewage

IDDE-12 Reporting and Record Keeping



Illicit Discharge Detection and Elimination

IDDE-1 – Legal Prohibition/Control Authority

(see Legal Prohibition and Control Authority section)

Except as associated with the industrial facilities program, the Illicit Discharge Detection and Elimination Program only applies to urban areas. See Appendix F for a Map of Urban Areas.

Illicit Discharge Detection and Elimination

IDDE-2 – Inventory & Inspection

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirements

“The permittee shall carry out inventorying, inspections and surveillance to determine compliance and noncompliance with the prohibition on illicit discharges to the MS4.

“Infrastructure Inventory - Study and inventory the MS4 to maintain the information required by 40 CFR 122.26(d)(1)(iii). All drainage systems and associated catchments shall be mapped and identified to facilitate illicit discharge source identification and elimination. Required information for new storm sewer networks and outfalls shall be added to the inventory at a reasonable time after they are constructed and operational.

“Inspection - All drainage systems in the permit coverage area shall be inspected once per permit cycle for evidence of illicit connections or improper disposal of wastes. Where monitoring data indicate a potential pollutant source or if there is evidence that recent activity has occurred that established an illicit connection, then the affected system will be inspected as necessary.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-2

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for the inventory and inspection of the MS4. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

The IDDE Field Protocol Manual in Appendix W describes how the LFUCG Department of Public Works and Development and/or the Department of Environmental Quality will conduct all field work related to illicit discharge detection. Listed below are key elements covered in the manual:

1. Definitions of illicit discharges
2. Planning required prior to field work
3. Field work preparation
4. Structure Inventory
5. Screening
6. Surveys
7. Post Fieldwork
8. Source Confirmation
9. Illicit Removal Confirmation

5. Documentation

- Maintain maps and lists of inventory electronically.
- Maintain copies of field notes and inspection forms.
- Maintain the Field Protocol Manual, including tracking of procedure revisions.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-2 – Inventory and Inspection

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|---|
| Stormwater Infrastructure Inventory | | |
| <p>Review and update the current major outfall mapping and inventory (see Appendix G). Show the following in GIS as required by 401 KAR 5:060 Section 12.(3)(a)3.b.</p> <ul style="list-style-type: none"> • Known major outfalls • Land use with population densities and projected 10-yr growth • Runoff coefficient for each land use • Landfills and WWTPs • KPDES stormwater permitted discharges • Major stormwater structural controls | 1. Complete by January 31, 2010. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop a schedule and then field verify the current major outfall mapping and inventory. See IN-2 for industries. | 2. Complete by January 31, 2010. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop procedures for adding new Major Outfalls or for updating the inventory. | 3. Complete by the end of Year 1. | Department of Public Works and Development and/or Department of Environmental Quality |
| Conduct desktop screening of storm sewersheds to prioritize likely areas of concern. | 4. Complete with 18 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Stormwater Inspection Procedures | | |
| <p>Review and update inspection procedures in the IDDE Field Protocol Manual (Appendix W).</p> <p>Inspect the drainage system for evidence of illicit discharges once per permit cycle.</p> | 5. Inspect the drainage system by the end of the renewed MS4 KPDES permit cycle. Beginning with high priority storm sewersheds. | Department of Public Works and Development and/or Department of Environmental Quality |
| Complete and implement procedures for conducting inspections and investigations when monitoring data, reported incidents, or other information indicate the likely existence of an illicit discharge. (Appendix W). | 6. Complete and commence implementation by January 31, 2009. | Department of Public Works and Development and/or Department of Environmental Quality |

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Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Illicit Discharge Detection and Elimination

IDDE-3 – Monitoring

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement – IDDE-3

“The permittee shall maintain water monitoring programs, procedures, and/or policies, including schedules, to detect illicit discharges and improper disposals to the MS4. This program will consist of water quality sampling at stormwater outfalls and representative field screening locations including in-stream sites.

“Major Outfall Screening - Major outfalls, as defined by Part III, C, Outfall Mapping, will be sampled for appropriate parameters to facilitate illicit discharge screening. Dry weather screening shall be performed once every two (2) years. Wet weather screening shall be performed once for each major outfall during the permit five (5) year cycle.

“Representative Outfall or Field Screening Points Sampling - Representative outfalls and field screening points shall be monitored once during the permit five (5) year cycle. Each point shall be screened for appropriate parameters. These will only be screened during dry weather but may be part of an investigative study during wet weather.

“In-stream Sampling - Create and implement a program and procedures for monitoring at "in stream" screening points. Representative sites shall be determined and sampled once every two (2) years.”

2. KPDES Permit Requirement – MON-1

“The permittee shall maintain programs, procedures, and/or policies for the screening and/or identification of significant discharges impacting the MS4. The permittee shall maintain an inventory of all field screening locations. Field screening locations shall include major outfalls, facility outfalls, in-stream screening points, or other field screening locations that are determined to yield representative data. Field screening points that are determined to yield representative data shall be accompanied by a narrative as to why that location was chosen; the frequency of sampling; parameters to be sampled; and a description of the sampling equipment.

“Major outfalls, as defined by Part III, C, Outfall Mapping, shall be monitored once every two (2) years for the following parameters: flow, e.coli, fecal coliforms, temperature, total dissolved solids, total chlorine, detergents, phenols, ammonia, pH, total suspended solids, oil & grease, and other parameters as determined to be of concern for the drainage area of the outfall. Wet weather samples shall be taken at every major outfall once during the five (5) year permit cycle. Each outfall shall be monitored for the same parameters as the dry weather monitoring.

“Each representative outfall and field screening point shall be monitored once during the five (5) year permit cycle for the following parameters: e.coli, fecal coliforms, temperature, total dissolved solids, total chlorine, detergents, phenols, ammonia, pH, total suspended solids, oil & grease, and other parameters as determined to be of concern for the drainage area of the outfall.

“Representative in-stream field screening sites shall be sampled for the following parameters: e.coli, fecal coliforms, temperature, total dissolved solids, total chlorine, detergents, phenols, ammonia, pH, total suspended solids, oil & grease, and other parameters as determined to be of concern for the drainage area of the

in-stream site. Each site shall be sampled once every two (2) years during a period of dry weather. Each site shall be monitored for a wet weather event once during the five (5) year permit cycle.

“Representative field screening points shall be monitored as needed related to water monitoring for the investigation and surveillance necessary for the identification and removal of illicit discharges or improper disposal of materials (including dirt, debris, and floatables).”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-3

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for the IDDE monitoring effort. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

The IDDE Field Protocol Manual in Appendix W describes how the LFUCG Department of Public Works and Development and/or the Department of Environmental Quality will conduct all field work related to illicit discharge detection. Listed below are key elements covered in the manual:

1. Definitions of illicit discharges
2. Planning required prior to field work
3. Field work preparation
4. Structure Inventory
5. Screening
6. Surveys
7. Post Fieldwork
8. Source Confirmation

9. Illicit Removal Confirmation

5. Documentation

- Retain copies of procedures, including tracking of procedure revisions.
- Retain a database and maps of the sampling and screening sites and matrices showing when each site was sampled.
- Retain copies of field notes and scan them to include in database.
- Retain copies of laboratory results and link to database.
- Retain documentation on why sites were chosen, the frequency sampled, the parameters sampled, and sampling equipment descriptions.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-3 – Monitoring

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>Major Outfall Screening</p> <p>Conduct dry weather screening for known Major Outfalls in accordance with the IDDE Field Protocol Manual in Appendix W.</p> <p>Appendix D contains the current list of dry weather screening points.</p> <p>Representative Outfall or Field Screening Points Sampling</p> <p>Conduct dry weather sampling in accordance with the IDDE Field Protocol Manual in Appendix W at representative outfalls and field screening points as determined by definitions (See IDDE-4).</p> <p>These are outfalls or points that are not Major Outfalls, but are locations of interest. Develop criteria for the determination of a “representative outfall” and a “location of interest.”</p> <p>These locations may be a part of an investigative study during wet weather.</p> | <p>7. Commencing in calendar year 2008, conduct dry weather screening at no less than 125 locations every year, which may include major outfalls and other screening points selected by LFUCG.</p> <p>8. Commencing in calendar year 2008, conduct dry weather screening of identified major outfalls once every two years.</p> <p>9. Conduct wet weather screening of major outfalls where appropriate based on results from the in-stream water quality monitoring program.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>In-Stream Sampling</p> <p>In-stream sampling will occur in conjunction with the Water Quality Monitoring Program (MON-3) element. If additional in-stream screening points are warranted, follow the sampling procedures associated with the Water Quality Monitoring Program element.</p> | | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

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| | | |
|--|--|--|
| <p>Compile all sampling field data and laboratory results in a database. Put results on website and in annual report when finalized.</p> <p>Include documentation regarding why field screening sites were chosen, the frequency of sampling, the parameters sampled, and a description of the sampling equipment.</p> <p>Evaluate sampling results to determine if further IDDE investigation (see IDDE-4) is necessary in areas tributary to the sampling point.</p> | <p>10. Develop database to track the IDDE program by January 31, 2009.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
|--|--|--|

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Illicit Discharge Detection and Elimination

IDDE-4 – Investigation

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies to investigate the MS4 when field screening information, citizen complaints/reports or employee reports indicate a illicit discharge or improper disposal of waste into the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-4

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for the IDDE investigation effort. Other LFUCG departments, including the Department of Public Safety, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

Appendix E contains LFUCG’s Procedures for Responding to Illicit Discharges and Spills and Environmental Compliance Policy that addresses issues such as spill prevention, spill response, and spill reporting. The IDDE Field Protocol Manual in Appendix W describes how the LFUCG Department of Public Works will conduct all field work related to illicit discharge detection. Listed below are key elements covered in the manual:

1. Definitions of illicit discharges
2. Planning required prior to field work
3. Field work preparation
4. Structure Inventory
5. Screening
6. Surveys
7. Post Fieldwork
8. Source Confirmation
9. Illicit Removal Confirmation

5. Documentation

- Maintain copies of investigation procedures and checklists, including tracking of revisions.
- Maintain log and tracking system of MS4 components to be investigated.
- Maintain field notes related to investigations.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-4 – Investigation

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|--|
| <p>Using the IDDE Field Protocol Manual (Appendix W), investigate affected portions of the storm sewer system during dry and wet weather based on the following:</p> <ul style="list-style-type: none"> • When field screening sampling results or inspections warrant investigation • When citizens or employees notify the government about an illicit discharge or improper disposal of waste <p>Notify appropriate local and state agencies once an illicit discharge is confirmed.</p> <p>Track investigations using the database developed in IDDE-3.</p> | <p>11. Within one year of permit issuance, review and update the existing criteria to evaluate, for internal purposes, whether sampling results from screening activities indicate the potential existence of an illicit discharge.</p> <p>10. Develop database within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Illicit Discharge Detection and Elimination IDDE-5 – Evaluation

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall evaluate incidents of confirmed illicit connections and improper disposal of wastes. Evaluations shall be performed to determine a ranking of the severity of the problem and the proper allocation of resources to remedy the problem in an appropriate manner.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-5

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for evaluating and ranking confirmed illicit discharges and improper disposals. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Retain copies of ranking procedures.
- Retain copies of ranked confirmed connections/discharges.
- Retain copies of the number of illicit discharges and improper disposals eliminated.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-5 – Evaluation

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Develop and implement a procedure for identifying a potential remedy based on the comparative severity of confirmed illicit connections and improper discharges, and for allocating resources as necessary.</p> <p>Develop and commence implementation of a protocol for elimination of confirmed illicit discharges.</p> | <p>12. Develop procedures to identify potential remedies for confirmed illicit discharges and improper discharges within one year of permit issuance.</p> <p>27. By January 31, 2009, develop and commence implementation of a protocol for elimination of confirmed illicit discharges.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Use the database developed in IDDE-3 to rank, evaluate, and continuously update the status of the confirmed discharges.</p> | <p>10. Develop database within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Evaluate sampling results to determine if changes to the SWQMP are necessary. For example, results may indicate that:</p> <ul style="list-style-type: none"> • More emphasis be placed on a particular activity in the educational materials. • More emphasis be placed on a particular pollutant in the educational materials. • More inspections may be needed in a particular area. | <p>13. Evaluate once every two years.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Illicit Discharge Detection and Elimination

IDDE-6 – Enforcement of Controls

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall require compliance with conditions in ordinances, permits, contracts and orders that prevent illicit discharges, spills, dumping and disposal of materials other than stormwater to the MS4. The permittee shall maintain enforcement programs, procedures, and/or policies to respond to the occurrence or detection of an illicit connection or improper waste disposal in accordance with the ordinances, operational procedures, or other regulatory means that have been established for the prohibition of such incidents.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-6

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for the enforcement of violations related to illicit discharges and improper disposals. Other LFUCG departments, including the Department of Law, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

Appendix O contains the enforcement protocols for addressing stormwater quality, including IDDE, and includes the following:

- an overview of existing ordinances and regulations
- an overview of enforcement authorities for the Commissioner of Public Works, Director of the Division of Engineering, Citation Officers, Inspectors, and the Infrastructure Hearing Board
- enforcement protocols, including civil citations and a schedule of fines
- future enforcement authorities

Appendix P contains the ordinance establishing the Infrastructure Hearing Board and Environmental Hearing Board. They were established in 2004 to enable certain staff (citation officers) to issue violations as a supplemental means of enforcement. Certain staff in the Department of Public Works and Development and/or the Department of Environmental Quality can be given citation authority to issue violations related to IDDE.

Appendix H contains the underground storage tank closure procedures.

5. Documentation

- Document enforcement programs/procedures/policies, including tracking of revisions.
- Keep records on enforcement actions related to each illicit discharge or improper disposal.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-6 – Enforcement of Controls

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>Review, improve, update as necessary the following enforcement procedures and recommend changes where appropriate:</p> <ul style="list-style-type: none"> • Division of Water and Air Quality • Code Enforcement • Division of Engineering • DEEM • Fire & Emergency Services • Health Department | <p>14. Review and recommend improvements to enforcement procedures within 12 months of permit issuance. (See IDDE-1).</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Initiate enforcement actions consistent with procedures in Appendix O to eliminate illicit as soon as practicable after identification of the source.</p> <p>Implementation of this measurable goal is contingent upon LFUCG having the authority to require responsible parties to complete eliminations of illicit discharges and improper disposals within 15 days. See LPCA Measurable Goals 2 and 5.</p> <p>See IDDE-11 for illicit associated with exfiltration or improper service connection associated with the sanitary sewer system.</p> | <p>15. Upon identification of the source of an illicit discharge or improper disposal, notify the responsible party within three days, if practical. Require the responsible party to eliminate the illicit discharge or improper disposal within 15 days of notification. If the responsible party cannot practically eliminate the illicit discharge or improper disposal within 15 days, require the party to submit a remedial plan and schedule, with an acceptable timeliness standard, to LFUCG for review and approval.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Track enforcement (elimination) efforts in database developed in IDDE-3.</p> | <p>10. Develop database within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Illicit Discharge Detection and Elimination IDDE-7 – Response to Spills

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies to respond to and contain spills that may discharge into the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-7

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality in association with other LFUCG Departments will develop the spill response and containment program and will determine who is going to be responsible for response and containment. Other LFUCG departments, including the Department of Public Safety and Department of Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

The Division of Fire and Emergency Services has numerous standard operating procedures and policies for responding to illicit discharges and spills, included in Appendix E. They are:

POL 571.47 – Hazardous Material Mission Statement

POL 571.48 – Hazardous Material Policy

POL 571.49 – Haz-Mat Expended Equipment Recovery
POL 571.50 – Acceptance/Pick-up of Hazardous Materials
POL 571.51 – Haz-Mat Decontamination
SOP 577.07 – Establishment of Zones/Haz Mat Incidents
SOP 577.08 – Research Officer's Role
SOP 577.09 – Emergency Field Decontamination
SOP 577.10 – EMS Functions/Haz-Mat Incidents
SOP 577.11 – Safety Officer's Role
SOP 577.12 – Decon Officer's Role
SOP 577.13 – Functions of the Entry Team
SOP 577.14 – Hot Zone Officer's Role
SOP 577.15 – Operations Officer's Role
SOP 577.16 – Haz-Mat Two Daily Operations
SOP 577.17 – Logistics Officer's Role
SOP 578.01 – Incident Safety Officer
SOP 578.02 – Emergency Operations/Hazardous Atmosphere

Appendix E also contains LFUCG's Environmental Compliance Policy that addresses issues such as spill prevention, spill response, and spill reporting. LEXCALL has a set of procedures for handling incoming inquiries and tracking calls that is included in Appendix J.

5. Documentation

- Document spill response and containment programs/procedures/policies, including tracking of revisions.
- Keep records and track all reported spills and their subsequent response, containment, and clean up.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-7 – Response to Spills

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Identify current spill response and containment policies, update as necessary. (LEXCALL, DEEM, Solid Waste, Fire & Emergency Services, Health Department, etc.) See Appendix J for LEXCALL reporting procedures.</p> <p>Review spill response and containment programs in other cities.</p> <p>Review and update procedures for reporting spills to the applicable local and state agencies.</p> <p>Implement the updated spill response and containment program.</p> | <p>16. Finalize and begin implementation of spill response program within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Illicit Discharge Detection and Elimination

IDDE-8 – Prevention and Control Plans

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies to reduce the potential for spills and illicit discharges. The program may include pollution prevention procedures and best management practices for the public, appropriate businesses, and institutions.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-8

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for providing pollution prevention procedures and best management practices. Other LFUCG departments, including the Department of Public Safety and the Department of Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Retain copies of the prevention and control of illicit discharges program/procedures/policies, including tracking of revisions.

- Keep logs related to the implementation measures associated with this program.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-8 – Prevention and Control Plans

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|---|
| Identify industries, businesses, and institutions that should have pollution prevention plans (SWPPPs). (See IN-4) | 17. Develop list within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Put links to pollution prevention procedures on the website (created in PE-1). Put links to best management practices on the website (created in PE-1). Have copies of these materials available at the front desks in the Division of Building Inspection, DOE, and Government Communications. | 18. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Identify employees who can provide training on prevention and control plans (SWPPPs). | 19. Develop list within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Illicit Discharge Detection and Elimination

IDDE-9 – Education

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall promote, publicize, and facilitate public reporting of the presence of illicit discharges and improper disposals and the associated water quality impacts. The permittee shall provide educational materials, public service announcements, and/or multimedia presentations regarding illicit connections and improper waste disposal into the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-9

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for the IDDE education effort. Other LFUCG departments, including the Department of Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Retain copies of educational materials.
- Record website hits.

- Keep log of printed materials dispersed.
- Retain copies of public service announcements.
- Retain copies of multimedia presentations.
- Track changes to educational materials, public service announcements, and multimedia presentations.
- Record number of public service announcements made.
- Record number of times multimedia presentations were shown and the size of the audience.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-9 – Education

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>Put links to educational materials about illicit connections and improper waste disposal on the website (created in PE-1).</p> <p>Have copies of these materials available at the front desks in the Division of Building Inspection, DOE, and Government Communications.</p> <p>These materials should inform the public about illicit discharges and improper disposals and their impacts on water quality.</p> <p>These materials should also publicize the LEXCALL phone number and website (see PI-1).</p> | <p>18. Have functional stormwater website within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Notify the public (determine target audience) regarding illicit connections and improper waste disposal into the MS4 using the following methods:</p> <ul style="list-style-type: none"> • Public Service Announcements • Multimedia presentations <p>Include ways for the public to identify and report illicit discharges</p> | <p>20. Have two notifications per year.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Illicit Discharge Detection and Elimination

IDDE-10 – Training

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall offer training to the public and businesses regarding the prevention, control, and mitigation of illicit discharges. The permittee shall provide training for the public and watershed stakeholders. The permittee shall also provide training for employees regarding illicit discharges, spill and illicit connection prevention, investigation procedures, and enforcement protocols.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-10

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for the IDDE training effort. Other LFUCG departments, including the Department of Public Safety, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of training modules and presentations, showing revisions as they are made.

- Keep track of the number of training activities conducted, including copies of agendas, lists of attendees, etc.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-10 – Training

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|---|
| <p>Identify staff and third party groups who are capable of providing training on IDDE.</p> <p>Prepare and/or use available training modules and presentations specific to the following audiences: business community, the general public and watershed stakeholders, and employees.</p> | 21. Complete by end of Year 1. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Business Community (Commercial and Industrial)</p> <ul style="list-style-type: none"> Conduct training session on developing SWPPPs | 22. One training session per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Community Training Opportunities</p> <p>As requested, participate in training activities led by community groups, such as Kentucky River Watershed Watch and Master Gardener Program.</p> | | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Employee Training</p> <ul style="list-style-type: none"> Conduct, facilitate, and participate in training activities to be conducted annually for appropriate LFUCG employees (those carrying out LFUCG's IDDE program). Target training to specific classes of employees. Cover the following IDDE topics: illicit discharges, spill & illicit connection prevention, investigation procedures, and enforcement protocol. | 23. Commencing in calendar year 2008, conduct one training session per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Develop audience surveys to measure attendance and evaluate the extent to which the target audience is being reached and ways to expand the audience reached.</p> | 24. Complete survey forms within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Illicit Discharge Detection and Elimination

IDDE-11 – Controls for Sanitary Sewage

1. Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies to detect, investigate and eliminate discharges of sanitary sewage from the municipal sanitary sewer system into the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table IDDE-11

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for the control of sanitary sewer exfiltration or improper service connections. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Track confirmed discharges of wastewater and improper service connections from identification, to evaluation, response plan preparation and implementation, and follow-up evaluations.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IDDE-11 – Controls for Sanitary Sewage

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|--|
| <p>If it is suspected during IDDE-2, 3, or 4, that an illicit discharge is due to sanitary sewer exfiltration or improper service connection, Public Works and Development and/or Environmental Quality will conduct a field evaluation.</p> <p>Use investigative techniques to verify initial field observations, including smoke testing, dye testing, tracer studies, and closed circuit television.</p> <p>Upon verification, repair or remedy un-permitted discharges and improper connections. If an improper service connection is verified, compliance action will be taken with the offender, if necessary. See IDDE-6.</p> <p>Conduct follow-up inspections, monitoring, and investigations to verify effectiveness of corrective action.</p> | <p>25. Within 30 days, where practical, conduct an investigation of reported, suspected illicit discharges due to sanitary sewer exfiltration or improper sanitary sewer connection to the MS4.</p> <p>26. Upon identification of the source of an illicit discharge due to sanitary sewer exfiltration or improper sanitary sewer connection to the MS4, notify the responsible party as soon as practical. Require the responsible party to eliminate the illicit discharge within 15 days of notification. If the responsible party cannot practically eliminate the illicit discharge within 15 days, require the party to submit a remedial plan</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

LFUCG Stormwater Quality Management Program

| | | |
|--|---|--|
| | and schedule, with an acceptable timeliness standard, to LFUCG for review and approval. Implementation of this measurable goal is contingent upon LFUCG having the authority to require responsible parties to complete eliminations of illicit discharges within 15 days. See LPCA Measurable Goals 2 and 5. | |
|--|---|--|

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Illicit Discharge Detection and Elimination

IDDE-12 – Reporting and Record Keeping

(see Reporting and Record Keeping section)

Construction Site Stormwater Runoff Control

CS-1 Legal Prohibition/Control Authority

CS-2 Water Quality Considerations in Site Planning

CS-3 Non-structural & Structural BMPs

CS-4 Site Inspection and Enforcement of Controls

CS-5 Education

CS-6 Training

CS-7 Reporting & Record Keeping



Construction Site Stormwater Runoff Control

CS-1 – Legal Prohibition/Control Authority

(see Legal Prohibition and Control Authority section)

Construction Site Stormwater Runoff Control CS-2 – Water Quality Considerations in Site Planning

1. Overview

“The objective is to develop, implement, and enforce programs to minimize pollutants in stormwater runoff from construction sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirements

“The permittee shall maintain programs, procedures, and/or policies for construction site planning which incorporate considerations of potential water quality and habitat impacts.”

3. Element Task, Frequency, and Responsible Party

See Table CS-2

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for reviewing water quality considerations in site planning. Other LFUCG departments, including the Departments of Administrative Services and Law, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

The existing procedures and standards related to water quality considerations are contained in the following:

- Appendix K - Environmental Routing Form for Development Plans – This is a checklist for development plan review.
- Appendix Q – Subdivision Regulation Article 6-7 (Stormwater Disposal Standards) and Article 6-11 (Standards for Environmentally Sensitive Areas and Geologic Hazard Areas)

- Appendix R - Zoning Ordinance Article 19 (Floodplain Conservation and Protection), Article 20 (Soil Erosion and Sediment Control), and Article 26 – Tree Protection Standards
- Appendix U - Stormwater Manual

Following is a description of the Stormwater Manual:

The Stormwater Manual contains design requirements and construction standards for new development and redevelopment. The manual is incorporated by reference into the subdivision regulations and zoning ordinance. Each chapter is briefly described below.

Chapter 1 contains water quality criteria for new development and redevelopment; mitigation for stream impacts; floodplain management standards; maintenance requirements; and erosion control requirements.

Chapter 2 contains permitting requirements of the LFUCG, KY Division of Water, U.S. Army Corps of Engineers, and FEMA.

Chapter 3 contains the standards for conducting watershed studies.

Chapter 4 describes the information that must be shown on design plans.

Chapter 5 contains the acceptable methods for conducting hydrologic analyses.

Chapter 6 contains design criteria for inlets, storm sewers, and manholes.

Chapter 7 contains design criteria for culverts.

Chapter 8 contains design criteria for open channels.

Chapter 9 contains methods for streambank stabilization and restoration.

Chapter 10 contains design criteria for bioretention, infiltration systems, filters, prefabricated treatment devices, detention ponds, extended detention ponds, wet ponds, and constructed wetlands.

Chapter 11 contains erosion and sediment control standards and design criteria.

Chapter 12 contains maintenance requirements of BMPs for LFUCG and commercial property owners.

5. Documentation

- Document any changes to programs/procedures/policies that require the consideration of water quality and habitat impacts during construction site planning.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table CS-2 – Water Quality Considerations in Site Planning

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Review the following and recommend changes where appropriate:</p> <ul style="list-style-type: none"> • Environmental review procedures within the Division of Planning. This includes the Environmental Routing form in Appendix K. • Zoning Ordinance, Subdivision Regulations and applicable sections of the Stormwater Manual (Appendix U). <p>Review current EPA rulings, regulations, and programs to determine the appropriate <u>site planning</u> requirements for mitigating impacts to water quality and habitat impacts during construction. Ensure that these items are addressed in the Stormwater Manual.</p> <p>Assess the need for establishing <u>site planning</u> requirements based on the downstream water bodies and their use (i.e. Jacobson Reservoir). These would need to be part of the Stormwater Manual and/or other local regulations.</p> <p>See Summary of Measurable Goals Attachment 1.</p> | <p>1. Conduct review of procedures related to water quality considerations in site planning by the end of Year 2.</p> <p>15. By January 31, 2009, develop and commence implementation of procedures for summary review of construction site erosion control plans to assess whether plans reasonably include measures that address potential water quality impacts from construction prior to authorization of land disturbance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Construction Site Stormwater Runoff Control

CS-3 – Non-structural & Structural BMPs

1. Overview

“The objective is to develop, implement, and enforce programs to minimize pollutants in stormwater runoff from construction sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies for non-structural and structural control best management practices to reduce pollutants in stormwater runoff from construction sites.

“Maintain programs, procedures, and/or policies for the site review and plan review process that address erosion and sediment controls and other stormwater pollution prevention measures.

“Maintain programs, procedures, and/or policies to require the installation and maintenance of effective stormwater pollution prevention best management practices for construction sites discharging to the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table CS-3

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for items related to non-structural and structural BMPs. Other LFUCG departments, including the Departments of Administrative Services and Law, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

The existing procedures and standards related to structural and non-structural BMPs are located in.

- Appendix Q – Subdivision Regulation Article 6-7 (Stormwater Disposal Standards) and Article 6-11 (Standards for Environmentally Sensitive Areas and Geologic Hazard Areas)
- Appendix R - Zoning Ordinance Article 19 (Floodplain Conservation and Protection), Article 20 (Soil Erosion and Sediment Control), and Article 26 – Tree Protection Standards
- Appendix U - Stormwater Manual

Following is a description of the Stormwater Manual.

The Stormwater Manual contains design requirements and construction standards for new development and redevelopment. The manual is incorporated by reference into the subdivision regulations and zoning ordinance. Each chapter is briefly described below.

Chapter 1 contains water quality criteria for new development and redevelopment; mitigation for stream impacts; floodplain management standards; maintenance requirements; and erosion control requirements.

Chapter 2 contains permitting requirements of the LFUCG, KY Division of Water, U.S. Army Corps of Engineers, and FEMA.

Chapter 3 contains the standards for conducting watershed studies.

Chapter 4 describes the information that must be shown on design plans.

Chapter 5 contains the acceptable methods for conducting hydrologic analyses.

Chapter 6 contains design criteria for inlets, storm sewers, and manholes.

Chapter 7 contains design criteria for culverts.

Chapter 8 contains design criteria for open channels.

Chapter 9 contains methods for streambank stabilization and restoration.

Chapter 10 contains design criteria for bioretention, infiltration systems, filters, prefabricated treatment devices, detention ponds, extended detention ponds, wet ponds, and constructed wetlands.

Chapter 11 contains erosion and sediment control standards and design criteria.

Chapter 12 contains maintenance requirements of BMPs for LFUCG and commercial property owners.

5. Documentation

- Document any changes to programs/procedures/policies that require the consideration of non-structural BMPs during construction site planning and structural BMPs installation and maintenance.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table CS-3 – Non-structural and Structural BMPs

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|--|
| <p>Non-Structural Controls and Structural Controls</p> <p>Review the design criteria for stormwater quality controls in the following and recommend changes where appropriate:</p> <ul style="list-style-type: none"> • Stormwater Manual (Appendix U) items related to structural and non-structural BMPs for stormwater pollution prevention. • Applicable sections of the Zoning Ordinances, Land Subdivision Regulations, and the LFUCG Code of Ordinances. • Environmental review procedures within the Division of Planning (the Environmental Routing Form is in Appendix K). <p>See Summary of Measurable Goals Attachment 1.</p> | <p>2. Conduct review within 2 years of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Review the "Kentucky Erosion and Sediment Control Field Guide" (2004) and the "Kentucky Site Planning and Specifications Manual" (2006). Update the LFUCG Stormwater Manual to reflect these two documents.</p> | <p>3. Conduct review and update by end of Year 2.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Develop example BMP plans and checklists for operators at construction sites.</p> | <p>4. Complete within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Construction Site Stormwater Runoff Control

CS-4 – Site Inspections and Enforcement of Controls

1. Overview

“The objective is to develop, implement, and enforce programs to minimize pollutants in stormwater runoff from construction sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies for site inspections and enforcement of stormwater pollution prevention controls. The permittee shall require compliance with conditions in ordinances, permits, contracts and orders that control stormwater discharge from construction sites to the MS4. The permittee prevent illicit discharges, spills, dumping and disposal of materials (including soil and debris) other than stormwater to the MS4 that result from construction sites.

“Maintain programs, procedures, and/or policies for the site inspections that are based upon prioritization criteria. These criteria shall consider the nature of the construction site, topography, and the characteristics of soils and receiving water quality.

“Require compliance with conditions in ordinances, permits, contracts and orders that control stormwater discharges from construction sites to the MS4. The permittee shall prevent illicit discharges, spills, dumping and disposal of materials (including soil and debris) other than stormwater to the MS4 that result from construction sites. Programs, procedures, and/or policies shall be maintained for the enforcement of control mechanisms that are based upon prioritization criteria. These criteria shall consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.”

3. Element Task, Frequency, and Responsible Party

See Table CS-4

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for inspections and enforcement of controls on construction sites. Other LFUCG departments, including the Department of Law, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

The existing procedures related to site inspections and enforcement are located in the Appendices described below:

Appendix S – Components of the Construction Site Runoff Control Program

This appendix contains the Department of Public Works procedures related to the construction site runoff control program as described below:

Procedures for Oversight of Erosion and Sediment Controls On Private Development Projects - The objective of these procedures is to improve the inspection, maintenance, and enforcement of erosion and sediment controls on regulated construction sites. It addresses submittal of the NOI, preparation of an erosion and sediment control plan, issuance of the LFUCG grading permit, inspection, and enforcement. The developer's engineer is required to provide inspection of erosion and sediment control BMPs. The Division of Engineering also conducts inspections to ensure that BMPs are in place and maintained.

Procedures for Oversight of Erosion and Sediment Controls On LFUCG Construction Projects - The objective of these procedures is to improve the inspection, maintenance, and enforcement of erosion and sediment controls on regulated LFUCG construction sites. It addresses submittal of the NOI, preparation of an erosion and sediment control plan, issuance of the LFUCG grading permit, inspection, and enforcement. The project engineer or contractor is required to provide inspection of erosion and sediment control BMPs. The Division of Engineering also conducts inspections to ensure that BMPs are in place and maintained.

Erosion and Sediment Control Requirements for Home Builders – This is published on LFUCG's web site and addresses enforcement and the proper installation of silt fence; construction entrances; seed, sod, and mulch; trash

disposal; curb inlet protection; surface inlet protection; inspection; and street cleaning.

Letter to Homebuilders – This letter was sent to all homebuilders in 2004 and is also on the LFUCG web site. It includes the document entitled Erosion and Sediment Control Requirements for Home Builders, an example plot plan, and a list of helpful resources.

LFUCG Checklist for Stormwater Permits in New Development – This is a checklist to ensure that all applicable permits have been obtained.

Also included in Appendix S are examples of the following

- Letter of Compliance
- Letter of Non-Compliance
- Infrastructure Progress Report
- Infrastructure Advisory Report

Appendix T – Procedures Manual for Infrastructure Development

These procedures describe how the LFUCG Department of Public Works manages the design and construction of roads, sanitary sewers and pump stations, and stormwater facilities in new development and redevelopment. The manual contains procedures for LFUCG staff, developer, and the developer's engineer. To ensure accountability, the three parties sign a contract that defines their responsibilities throughout the development process, including home construction and commercial building construction. Listed below are key elements of the manual related to the design and construction of stormwater facilities:

1. The developer's engineer is required to
 - develop accurate and complete designs and construction plans
 - provide full time inspection during construction of infrastructure
 - prepare an erosion and sediment control plan
 - mark in the field the "do not disturb" areas shown on the erosion and sediment control plan
 - evaluate off-site stormwater impacts resulting from new development
 - possess professional liability insurance
2. The developer is required to provide a one-year warranty on the stormwater facilities.
3. The developer/engineer is required to apply for and obtain the stormwater related permits.
4. The developer is required to install and maintain erosion and sediment controls.
5. The Division of Engineering administers the development process and requires the developer's engineer to comply with the design standards in the Stormwater Manual.
6. The Division of Engineering reviews the plans to ensure that all items required by the Stormwater Manual have been submitted.

7. The Division of Engineering conducts field inspections to ensure that the developer's engineer is providing full time inspection.
8. Appendix F of the Procedures Manual contains a commercial/industrial agreement to maintain stormwater management facilities.
9. The home builder is required to install and maintain erosion controls.
10. The Division of Engineering conducts inspections during home building to ensure that erosion controls on individual lots are installed and maintained.

Appendix O – Enforcement Protocols for Ordinance Provisions Addressing Stormwater Quality

This appendix contains the enforcement protocols for addressing stormwater quality, including construction sites, and includes the following:

- an overview of existing ordinances and regulations
- an overview of enforcement authorities for the Commissioner of Public Works, Director of the Division of Engineering, Citation Officers, Inspectors, and the Infrastructure Hearing Board
- enforcement protocols, including civil citations and a schedule of fines
- future enforcement authorities

5. Documentation

- Document any changes to programs/procedures/policies that involve the inspection and enforcement.
- Document prioritization criteria.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table CS-4 – Site Inspections and Enforcement of Controls

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>Site Inspections</p> <p>Review the following and recommend changes where appropriate:</p> <ul style="list-style-type: none"> • Procedures within the DOE for site inspections and enforcement. • Procedures for reporting violations to local, state, and federal agencies. <p>Review and update existing inspection checklists to ensure compliance with the KPDES construction general permit.</p> <p>Conduct site inspections at active construction sites.</p> | <p>5. By January 31, 2009, review construction site inspection and enforcement procedures and the existing inspection checklist and develop and commence implementation of revised procedures and checklist. Revised enforcement procedures shall provide for use of escalating enforcement remedies. Such procedures shall serve as a guide in LFUCG's enforcement program but shall not limit LFUCG's enforcement discretion in particular cases.</p> <p>6. Commencing with the first full calendar month after entry of the Consent Decree, conduct monthly inspections of at least 90% of</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

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| | active construction sites with reasonable potential to discharge to the MS4. | |
| Targeted Inspections Develop protocols for targeting construction sites for additional inspections based on: <ul style="list-style-type: none"> • Nature of the construction site. • Complaints • Topography. • Characteristics of soils on site. • Types of chemicals and processes being used during construction. • Proximity to water bodies • The uses of the receiving water body. | 7. Develop protocols for targeting active construction site for additional inspections. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop a database to track active construction sites, inspections, and enforcement actions (NOVs). | 8. By January 31, 2009, develop construction site database. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Construction Site Stormwater Runoff Control CS-5 – Education

1. Overview

“The objective is to develop, implement, and enforce programs to minimize pollutants in stormwater runoff from construction sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall provide educational materials, public service announcements, and/or multimedia presentations regarding stormwater pollution prevention for construction sites through the effective use of best management practices. The permittee shall provide educational materials that discuss the associated water quality and aquatic community impacts from poor construction practices.”

3. Element Task, Frequency, and Responsible Party

See Table CS-5

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for educating the public about stormwater pollution prevention for construction sites. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Retain copies of educational materials.
- Record website hits.
- Keep log of printed materials dispersed.
- Retain copies of public service announcements.

- Retain copies of multimedia presentations.
- Track changes to educational materials, public service announcements, and multimedia presentations.
- Record number of public service announcements made.
- Record number of times multimedia presentations were shown and the size of the audience.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table CS-5 – Education

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|---|
| Put links to educational materials and multimedia presentations about construction site runoff control and best management practices on the website (created in PE-1). | 9. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Have copies of BMP materials available at the front desks in the Division of Building Inspection and DOE. | 10. Update copies of construction site BMP materials and make them available for distribution within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Construction Site Stormwater Runoff Control

CS-6 – Training

1. Overview

“The objective is to develop, implement, and enforce programs to minimize pollutants in stormwater runoff from construction sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall offer training to construction site operators regarding best management practices to control and prevent pollution in stormwater runoff from construction activities to the MS4. The training will discuss stormwater pollution prevention for construction activities; the impacts of pollution from construction activities upon the municipal separate storm sewer system and receiving waters; and the enforcement mechanisms of the local, state, and federal regulating authorities. The permittee shall also provide training for appropriate employees regarding stormwater pollution prevention measures for construction sites, inspection procedures, and enforcement protocols.”

3. Element Task, Frequency, and Responsible Party

See Table CS-6

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for training site developers and employees about stormwater pollution prevention for construction sites. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of training modules and presentations, showing revisions as they are made.
- Keep track of the number of training activities conducted, including copies of agendas, lists of attendees, etc.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table CS-6 – Training

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|---|
| <p>Identify staff and third party groups who are capable of providing training on construction site runoff control.</p> <p>Prepare and/or use available training modules and presentations specific to construction site operators and LFUCG employees. Cover the subjects of pollution prevention for stormwater activities, receiving water quality, inspection procedures, and enforcement protocols.</p> | 11. Complete by end of Year 1. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Conduct training sessions for the construction community, including site developers, designers, and contractors' inspectors in land management and construction categories that impact water quality. Some of those categories include, but are not limited to:</p> <ul style="list-style-type: none"> • Erosion and Sediment Control • Stormwater Pollution Prevention, IDDE, and potential penalties • Work in and along streams and wetlands • Low Impact Development | 12. Begin in Year 2 and conduct one training session per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Conduct training sessions for LFUCG employees who carry out LFUCG's construction site runoff control program and who are involved with construction site inspections and enforcement. Training sessions to cover:</p> <ul style="list-style-type: none"> • Pollution Prevention Measures for Construction Sites • Inspection Procedures • Enforcement Procedures <p>After July 1, 2008, only inspections carried out by employees who have received such training will count as inspections meeting the requirements of Measurable Goal CS-6.</p> | 13. Begin in Year 1 and conduct one training session per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Develop audience surveys to measure attendance and evaluate the extent to which the target audience is being reached and ways to expand the audience reached.</p> | 14. Complete survey forms within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Construction Site Stormwater Runoff Control CS-7 – Reporting and Record Keeping

(see Reporting and Record Keeping section)

Pollution Prevention in Residential and Commercial Areas

PPRC-1 Legal Prohibition/Control Authority

PPRC-2 Pollution Prevention Planning for New Development & Redevelopment

PPRC-3 Maintaining Stormwater Structures

PPRC-4 Inventory, Monitoring, & Inspection

PPRC-5 Pollution Prevention Enforcement

PPRC-6 Evaluation

PPRC-7 Education

PPRC-8 Training

PPRC-9 Reporting & Record Keeping



Pollution Prevention in Residential and Commercial Areas

PPRC-1 – Legal Prohibition/Control Authority

(see Legal Prohibition and Control Authority section)

The Pollution Prevention in Residential and Commercial Areas Program only applies to urban areas. See Appendix F for a Map of Urban Areas.

Pollution Prevention in Residential and Commercial Areas

PPRC-2 – Pollution Prevention Planning for New Development & Redevelopment

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirements

“The permittee shall maintain planning programs, procedures, and/or policies to develop and implement controls to reduce the discharge of pollutants from MS4 which receive stormwater from areas of new development or redevelopment.

“Maintain a comprehensive master planning process that is compatible with the prevention and reduction of pollutants from the MS4. The master plan shall identify management objectives for streams, wetlands, and other receiving water bodies. The master plan shall identify areas where urban development or redevelopment is likely to occur and shall consider relevant factors related to stormwater pollution prevention.

“Maintain a comprehensive engineering design standards process that is compatible with the prevention and reduction of pollutants from the MS4. The design standards shall be a part of the comprehensive master planning process to prevent or reduce pollutants from the MS4. The designs standards shall maintain procedures for site planning which incorporate considerations of potential water quality and habitat impacts.”

3. Element Task, Frequency, and Responsible Party

See Table PPRC-2

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for pollution prevention planning for new development and redevelopment. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

The existing procedures and standards related to pollution prevention planning in new development and redevelopment are contained in the following:

- Appendix K - Environmental Routing Form for Development Plans – This is a checklist for development plan review.
- Appendix L – Commercial Development Procedures and Water Quality BMPs These procedures describe the process for obtaining a building permit for commercial projects. It addresses submittals, reviews, pre-construction meetings, and erosion control requirements. It also includes water quality requirements for gas stations, car washes, and automotive repair shops.
- Appendix Q – Subdivision Regulation Article 6-7 (Stormwater Disposal Standards) and Article 6-11 (Standards for Environmentally Sensitive Areas and Geologic Hazard Areas)
- Appendix R - Zoning Ordinance Article 19 (Floodplain Conservation and Protection), Article 20 (Soil Erosion and Sediment Control), and Article 26 – Tree Protection Standards
- Appendix U - Stormwater Manual

Following is a description of the Stormwater Manual:

The Stormwater Manual contains design requirements and construction standards for new development and redevelopment. The manual is incorporated by reference into the subdivision regulations and zoning ordinance. Each chapter is briefly described below.

Chapter 1 contains water quality criteria for new development and redevelopment; mitigation for stream impacts; floodplain management standards; maintenance requirements; and erosion control requirements.

Chapter 2 contains permitting requirements of the LFUCG, KY Division of Water, U.S. Army Corps of Engineers, and FEMA.

Chapter 3 contains the standards for conducting watershed studies.

Chapter 4 describes the information that must be shown on design plans.

Chapter 5 contains the acceptable methods for conducting hydrologic analyses.

Chapter 6 contains design criteria for inlets, storm sewers, and manholes.

Chapter 7 contains design criteria for culverts.

Chapter 8 contains design criteria for open channels.

Chapter 9 contains methods for streambank stabilization and restoration.

Chapter 10 contains design criteria for bioretention, infiltration systems, filters, prefabricated treatment devices, detention ponds, extended detention ponds, wet ponds, and constructed wetlands.

Chapter 11 contains erosion and sediment control standards and design criteria.

Chapter 12 contains maintenance requirements of BMPs for LFUCG and commercial property owners.

5. Documentation

- Keep copies of the Comprehensive Plan and Engineering Design Standards.
- Keep copies of minutes related to meetings regarding updates and/or evaluations of the Comprehensive Plan and Engineering Design Standards.
- Document and track changes to the Comprehensive Plan and Engineering Design Standards.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPRC-2 – Pollution Prevention Planning for New Development & Redevelopment

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| LFUCG Comprehensive Plan | | |
| <p>Review and update the process for public input and Planning Commission/UCC approval of the Comprehensive Plan.</p> <p>Note: The Comprehensive Plan is updated every 5 years. The 2007 draft section entitled <u>Environmental and Green Infrastructure</u> is contained in Appendix II.</p> <p>Review and update the elements of the Comprehensive Plan related to stormwater management</p> <ul style="list-style-type: none"> • Management objectives for streams, wetlands, and other receiving water bodies. • Factors related to stormwater pollution prevention in urban development and redevelopment. <p>Re-evaluate the stormwater components of the Comprehensive Plan every 5 years.</p> | <p>1. Conduct review of stormwater issues in the Comprehensive Plan as part of the 5-year update process.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| LFUCG Engineering Design Standards | | |
| <p>Review and update the applicable sections of the Stormwater Manual related to engineering design standards.</p> <p>Re-evaluate applicable sections of the Subdivision Regulations.</p> <p>Review and update the following:</p> <ul style="list-style-type: none"> • Stormwater management review procedures within the Division of Planning and the Division of Engineering. • Review recent EPA guidance and policy to determine the appropriate mitigation requirements for mitigating impacts to water quality and habitat impacts. Ensure that these items are addressed in the Stormwater Manual. • If necessary, develop procedures for determining the level of mitigation for water quality impacts. | <p>2. By January 31, 2010, review and update, as appropriate, with the goal of improving water quality in stormwater discharges from new development and redevelopment, engineering design standards, applicable sections of the Subdivision Regulations, and the procedures for reviewing development plans for compliance with stormwater management requirements, and reevaluate every three years thereafter. Consistent with the goal of improving</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

LFUCG Stormwater Quality Management Program

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| | water quality, in conducting the review and update, and successive reevaluations, LFUCG shall also have a goal of identifying and removing any legal impediments to, and facilitating the use of, "green infrastructure" alternatives to managing post-construction stormwater, such as infiltration, reuse, and evapotranspiration. | |
| Develop low impact development guidelines for new development and redevelopment. | 3. Develop within three years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Pollution Prevention in Residential and Commercial Areas

PPRC-3 –Maintaining Stormwater Structures

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain maintenance programs, procedures, and/or policies for structural controls that reduce pollutants (including floatables) from stormwater runoff from commercial and residential areas that are discharged from the MS4. Schedules for the maintenance requirements for the effective control and prevention of pollution shall also be included in the programs, procedures, and/or policies.

“Maintain programs, procedures, and/or policies for structural controls located on private properties that reduce pollutants (including floatables) from runoff that are discharged from the MS4. These are structural controls in residential or commercial areas for which the private property owner maintains the structure.”

“Create and implement Operation & Maintenance protocols for the public to use to reduce pollutants (including floatables) from stormwater runoff from privately held and maintained residential and commercial areas from the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table PPRC-3

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for reviewing and updating procedures

that address the maintenance of stormwater quality controls on private residential and commercial property. Currently, LFUCG maintains the spillways and related structures of detention basins in single family residential areas, but the property owner is responsible for mowing and trash pickup. The property owner of retention ponds in residential areas is typically responsible for all maintenance. In commercial areas, the property owner is responsible for all maintenance of detention basins and retention ponds. LFUCG conducts regular inspections of all detention basins and retention ponds in residential and commercial areas and notifies the responsible party of repairs that need to be made.

Existing procedures related to maintenance are described below:

Appendix N – Detention Basin and Retention Pond Inspection Procedures

This appendix describes the Division of Engineering procedures for inspecting all known detention basins and retention ponds on a regular basis. The inspections are conducted to monitor the overall condition of the basins and to ensure that appropriate maintenance is conducted. Over 1200 basins (as of March 2007) are inspected on a semi annual basis and necessary maintenance is performed by the responsible party. Basins that require more frequent maintenance are inspected on a quarterly basis. Retention ponds in residential areas are inspected monthly. The current list of detention basins and retention ponds is in Appendix M.

A program was started in 2002 for LFUCG to make corrective maintenance measures on all residential detention basins outside of routine maintenance such as mowing and picking up trash. Also, the Retention Pond Action Match Program in the appendix was established to aid neighborhood associations in carrying out identified retention pond improvement activities.

5. Documentation

- Record the results of inspections
- Maintain copies of inspection records and procedures.
- Track changes as needed.
- Keep copies of schedules and maintenance logs.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPRC-3 – Maintaining Stormwater Structures

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|---|
| Update Greenway inventory. | 4. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Evaluate programs and procedures for maintenance of Greenways on public and private property within two years of permit issuance. | 5. Complete within two years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Review, assess, and evaluate the current programs and procedures for maintenance of structural BMPs and other stormwater features (swales, stream banks, etc.) on private residential/commercial property, including</p> <ul style="list-style-type: none"> • Detention basin and retention pond maintenance program • Contractual Agreement between LFUCG and commercial property owners (Appendix F in Procedures Manual) – See Appendix T of this SWQMP <p>Schedule maintenance on detention basins and retention ponds as soon as practicable after identifying maintenance problems.</p> <p>See Summary of Measurable Goals Attachment 2.</p> | <p>6. By January 31, 2009, develop and propose an ordinance to the UCC that would require owners of privately-owned retention and detention basins and other privately-owned stormwater control structures to perform proper maintenance, cleaning, and repair on such structures.</p> <p>7. Complete evaluation of programs and procedures for maintenance of post-construction stormwater quality controls on private residential and commercial property within two years of</p> | Department of Public Works and Development and/or Department of Environmental Quality |

LFUCG Stormwater Quality Management Program

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| | <p>permit issuance.</p> <p>28. By January 31, 2010, develop and commence implementation of a program to require private owners of stormwater controls to conduct necessary maintenance, cleaning and repairs of such controls. Such program shall address privately-owned retention ponds, detention basins, and other stormwater quality treatment facilities.</p> | |
| Develop operations and maintenance guidelines for post-construction stormwater quality controls for use by private property owners that addresses structural and non-structural stormwater runoff controls on private property. (Coordinate with PE – Public Education). | 8. Complete within two years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Pollution Prevention in Residential and Commercial Areas

PPRC-4 –Inventory, Monitoring, & Inspection

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

The permittee shall maintain programs, procedures, and/or policies for the inspection, surveillance, and monitoring of structural source controls to reduce pollutants (including floatables) from stormwater runoff from residential and commercial land uses from the MS4. The permittee shall maintain schedules related to the inspection and monitoring of pollution prevention controls. The permittee shall maintain an inventory of the structural and source controls, areas of use, and operational and maintenance records.

“Stormwater structural controls shall be monitored that discharge into the MS4 and waters of the Commonwealth. The parameters monitored shall be for the constituents for which the structure was designed to reduce and any other constituents of concern for the receiving waters.”

3. Element Task, Frequency, and Responsible Party

See Table PPRC-4

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for inventorying, monitoring, and inspecting BMPs. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Maintain maps and inventory of structures.
- Document inspection schedule, procedures, and checklists, including any updates.
- Keep copies of operational and maintenance records related to each structural and source control inspected.
- Keep monitoring results and inspection reports.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPRC-4 – Inventory, Monitoring, & Inspection

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|--|
| <p>Update the inventory and map of post-construction stormwater quality controls in residential and commercial areas, including detention basins, retention ponds, and stormwater quality treatment facilities.</p> <p>See Summary of Measurable Goals Attachment 2 for a list of stormwater controls to be mapped.</p> | <p>9. By January 31, 2009, develop and commence implementation of a program to maintain publicly-owned or operated stormwater controls. Such program shall address publicly-owned or operated retention ponds, detention ponds, Stormceptors, catch basins, culvert inlets, and open channels. Such program shall provide for inspections in accordance with the inspection frequency outlined in Summary of Measurable Goals Attachment 2. Such program shall further provide for the scheduling and implementation of cleaning, maintenance, and repairs determined to be necessary during inspections.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

| | | |
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| | <p>10. Commencing in calendar year 2009, annually update the inventory and map.</p> <p>11. Develop an inventory and a map of publicly-owned storm sewer pipes 18" and larger by the end of the renewed MS4 KPDES permit cycle. After this initial effort, the inventory and map will be updated annually.</p> | |
| <p>Develop an inspection schedule for the post-construction stormwater controls.</p> <p>See Summary of Measurable Goals Attachment 2.</p> | <p>12. Complete within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Develop procedures and checklists to facilitate inspections of post-construction stormwater controls.</p> | <p>13. Complete within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Conduct inspections of publicly- and privately-owned detention basins and retention ponds. Include the following:</p> <ul style="list-style-type: none"> • Review operation and maintenance records. • Conduct necessary monitoring. <p>See Appendix M for the list of known detention basins and retention ponds.</p> <p>See Summary of Measurable Goals Attachment 2.</p> | <p>14. Commencing with the first full calendar month after entry of the Consent Decree, ensure the inspection of at least 90% of the publicly- and privately-owned detention basins with reasonable potential to discharge pollutants to the MS4 at</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

LFUCG Stormwater Quality Management Program

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| | <p>least two times a year.</p> <p>15. Commencing with the first full calendar month after entry of the Consent Decree, ensure the inspection of at least 90% of the publicly- and privately-owned retention ponds with reasonable potential to discharge pollutants to the MS4 at least once a month.</p> | |
| <p>Conduct inspections of critical culverts and structures contained in Appendix LL for clogging and excessive sediment buildup.</p> <p>See Summary of Measurable Goals Attachment 2.</p> | <p>16. Commencing with the first full calendar month after entry of the Consent Decree, ensure the inspection of at least 90% of the culverts in Appendix LL for clogging and excessive buildup of sediment at least once a month and within three days of a rainfall of 1 inch or more in a calendar day.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Based upon results of inspections, prepare a prioritized schedule for and perform necessary repairs, cleaning, and maintenance for those structures for which LFUCG is responsible.</p> <p>See Summary of Measurable Goals Attachment 2.</p> | <p>17. Complete by January 31, 2009.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Based upon results of inspections, require responsible parties to perform necessary repairs, cleaning, and maintenance for those structures for which LFUCG is not responsible.</p> <p>See Summary of Measurable Goals Attachment 2.</p> | <p>18. Require responsible parties to perform necessary</p> | <p>Department of Public Works and Development and/or Department of Environmental</p> |

LFUCG Stormwater Quality Management Program

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| | repairs, cleaning, and maintenance. | Quality |
| Develop procedures to identify, prioritize, and monitor (water sampling) select post-construction stormwater quality controls. | 19. Develop procedures within three years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Pollution Prevention in Residential and Commercial Areas

PPRC-5 – Pollution Prevention Enforcement

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“Require compliance with conditions in ordinances, regulations, permits, contracts and orders that control stormwater discharges from commercial and residential areas from the MS4.

“Maintain programs, procedures, and/or policies that require compliance with and enforce the conditions and requirements for the planning, construction, operation and maintenance of structural controls to reduce pollutants (including floatables) discharged from the MS4.

“The permittee shall maintain programs, procedures, and/or policies that require compliance with and enforce the conditions and requirements for the planning, construction, operation and maintenance of source controls to reduce pollutants (including floatables) discharged from the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table PPRC-5

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for enforcement activities in situations where the property owner refuses to make repairs to post-construction stormwater

structures as a result of inspections made by LFUCG. Procedures related to enforcement are described below:

Appendix O – Enforcement Protocols for Ordinance Provisions Addressing Stormwater Quality

This appendix contains the enforcement protocols for addressing stormwater quality and includes the following:

- an overview of existing ordinances and regulations
- an overview of enforcement authorities for the Commissioner of Public Works, Director of the Division of Engineering, Citation Officers, Inspectors, and the Infrastructure Hearing Board
- enforcement protocols, including civil citations and a schedule of fines
- future enforcement authorities

Appendix P contains the ordinance establishing the Infrastructure Hearing Board and Environmental Hearing Board. They were established in 2004 to enable certain staff (citation officers) to issue violations as a supplemental means of enforcement.

5. Documentation

- Document and track any changes to enforcement procedures.
- Track enforcement actions related to structural and source controls.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPRC-5 – Pollution Prevention Enforcement

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|---|
| Review the following and recommend changes to inspection and enforcement procedures where appropriate: <ul style="list-style-type: none">• Policies and procedures in regards to field enforcement programs; ensure consistency between individual inspectors• Applicable Code of Ordinances contained in Appendix P• Chapter 16 and 16A of the Code of Ordinances | 20. Complete within two years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Pollution Prevention in Residential and Commercial Areas

PPRC-6 – Evaluation

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“Maintain planning and evaluation procedures to determine the effectiveness and usefulness of structural and source control programs and procedures for the reduction or elimination of pollutants (including floatables) from the runoff of urban land use areas discharged from the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table PPRC-6

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for evaluating structural and source controls. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of the procedures.
- Keep evaluation data and conclusions.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPRC-6 – Evaluation

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|--|
| <p>Evaluate the effectiveness of structural and source controls required by the LFUCG Stormwater Manual. See Appendix U.</p> <p>Review and/or develop procedures to evaluate the effectiveness of the different types of controls. (Done in conjunction with PPRC-4.)</p> <p>Conduct evaluations.</p> | <p>21. Evaluate controls once per permit cycle.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Pollution Prevention in Residential and Commercial Areas

PPRC-7 – Education

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall promote, publicize, and facilitate public reporting of the proper implementation of structural and source controls to reduce pollutants (including floatables) from stormwater runoff from the MS4. The permittee shall provide educational materials, public service announcements, and/or multimedia presentations regarding the implementation of structural and source controls to reduce or eliminate pollutants discharged from the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table PPRC-7

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for educating the public about pollution prevention practices. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Retain copies of educational materials.
- Record website hits.
- Keep log of printed materials dispersed.
- Retain copies of public service announcements.

- Retain copies of multimedia presentations.
- Track changes to educational materials, public service announcements, and multimedia presentations.
- Record number of public service announcements made.
- Record number of times multimedia presentations were shown and the size of the audience.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPRC-7 – Education

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|---|
| Put links to source controls on the website (created in PE-1). | 22. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Put links to structural controls on the website (created in PE-1). | 22. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Put links to the Operations and Maintenance Protocols developed for the public (PPMO-4) on the website. | 22. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Have copies of structural and source control materials and the Operations and Maintenance Manual (referenced in PPMO) available at the front desks in the Division of Parks and Recreation, Division of Streets, Roads, and Forestry, and DOE. | 23. Complete within two years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Use Channel 3 to publicize and promote education resources. | 24. After its development, periodically advertise the stormwater website on Channel 3. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Pollution Prevention in Residential and Commercial Areas

PPRC-8 – Training

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall provide training appropriate employees and the public regarding the proper implementation of structural and source controls to reduce pollutants (including floatables) from stormwater runoff discharged from the MS4.

“Make available training for the public and watershed stakeholders. The training will discuss stormwater pollution prevention through the proper planning, construction, operation, and maintenance of structural and source controls. The training shall discuss the impacts to the waters of the Commonwealth if such control measures are not used or are not properly planned, implemented, operated, or maintained. It shall also discuss proper procedures for effective pollutant control and the enforcement mechanisms of the local, state, and federal regulating authorities.

“Provide training for appropriate employees regarding stormwater pollution prevention measures for structural and source controls, inspection procedures, and enforcement protocols. The training will discuss stormwater pollution prevention through the proper planning, construction, operation, and maintenance of structural and source controls. The training shall discuss the impacts to the waters of the Commonwealth if such control measures are not used or are not properly planned, implemented, operated, or maintained. It shall

also discuss proper procedures for effective pollutant control and the enforcement mechanisms of the local, state, and federal regulating authorities.”

3. Element Task, Frequency, and Responsible Party

See Table PPRC-8

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for training the public on pollution prevention in residential and commercial areas. Other LFUCG departments and third party groups will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of training modules and presentations, showing revisions as they are made.
- Keep track of the number of training activities conducted, including copies of agendas, lists of attendees, etc.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPRC-8 – Training

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|---|
| Identify staff and third party groups who are capable of providing training on pollution prevention in residential and commercial areas. Prepare and/or use available training modules and presentations specifically tailored for the general public. | 25. Complete by end of Year 1. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop and conduct training for the public that covers structural and source control planning, construction, operation, and maintenance. Include receiving water impact and enforcement control. | 26. Conduct one training session per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop audience surveys to measure attendance and evaluate the extent to which the target audience is being reached and ways to expand the audience reached. | 27. Complete survey forms within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Pollution Prevention in Residential and Commercial Areas

PPRC-9 – Reporting and Record Keeping

(see Reporting and Record Keeping section)

Pollution Prevention for Municipal Operations

PPMO-1 Legal Prohibition/Control Authority

PPMO-2 Municipal Construction Projects

PPMO-3 Maintaining Stormwater Structures

PPMO-4 Municipal Practices

PPMO-5 Inventory, Monitoring, & Inspection

PPMO-6 Training

PPMO-7 Reporting & Record Keeping



Pollution Prevention for Municipal Operations

PPMO-1 – Legal Prohibition/Control Authority

(see Legal Prohibition and Control Authority section)

The Pollution Prevention for Municipal Operations Program only applies to urban areas.
See Appendix F for a Map of Urban Areas.

Pollution Prevention for Municipal Operations

PPMO-2 –Municipal Construction Projects

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal operations to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies for municipal construction projects to prevent or reduce pollutant in stormwater from the MS4. The permittee shall maintain procedures for site planning which incorporate considerations of potential water quality and habitat impacts.

“Maintain programs, procedures, and/or policies for capital, rehabilitation, or reconstruction projects to prevent or reduce pollutant in stormwater from the MS4 and assess the potential impacts to water quality and aquatic habitat of receiving water bodies.

“Maintain programs, procedures, and/or policies for flood management projects to assure that such projects assess the potential impacts to water quality and aquatic habitat of receiving water bodies.

“Maintain programs, procedures, and/or policies for evaluating elements of the stormwater management system for the retrofitting thereof to provide additional pollutant removal. Structures or systems for which retrofitting will provide additional pollutant removal shall be identified and ranked based upon appropriate criteria.”

3. Element Task, Frequency, and Responsible Party

See Table PPMO-2

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for pollution prevention associated with municipal construction projects. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

Appendix S contains the following:

Procedures for Oversight of Erosion and Sediment Controls On LFUCG Construction Projects - The objective of these procedures is to improve the inspection, maintenance, and enforcement of erosion and sediment controls on regulated LFUCG construction sites. It addresses submittal of the NOI, preparation of an erosion and sediment control plan, issuance of the LFUCG grading permit, inspection, and enforcement. The project engineer or contractor is required to provide inspection of erosion and sediment control BMPs. The Division of Engineering also conducts inspections to ensure that BMPs are in place and maintained.

5. Documentation

- Maintain copies of the programs and procedures to address stormwater quality in LFUCG construction projects, tracking any changes as needed.
- Maintain copies of the programs and procedures to address stormwater quality in LFUCG flood management projects, tracking any changes as needed.
- Maintain the ranking criteria for stormwater structure retrofits.
- Maintain a prioritized list of stormwater structures for retrofit.
- Maintain a list of stormwater structures retrofitted.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPMO-2 – Municipal Construction Projects

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Capital, Rehabilitation, and Reconstruction Projects</p> <p>Update the general conditions section of the specifications for construction projects to ensure that contractors understand their obligations under local, state, and federal permits and stormwater pollution prevention requirements, also may include standards that address the following:</p> <ul style="list-style-type: none"> • potential impacts to water quality and terrestrial/aquatic habitat from LFUCG construction projects • programs and procedures for preventing or reducing stormwater pollution from LFUCG construction projects • procedures to submit an application for coverage under the KPDES construction permit for projects disturbing one acre or greater | <p>1. Complete by end of Year 2.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Flood Management Projects</p> <p>Update the general conditions section of the specifications for construction projects to ensure that contractors understand their obligations under local, state, and federal permits and stormwater pollution prevention requirements, also may include standards that address programs and procedures for assessing water quality and terrestrial/aquatic habitat impacts of LFUCG flood management projects.</p> | <p>2. Complete by end of Year 2.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Retrofitting of Existing Stormwater Management Structures and Systems</p> <p>Develop list of structures with the potential for retrofitting.</p> <p>Develop and maintain programs and procedures for evaluating the feasibility of retrofitting detention basins and other stormwater management structures to improve the removal of stormwater pollutants.</p> <p>Develop criteria for staff to prioritize water quality retrofitting projects.</p> <p>Maintain list of retrofitted stormwater management structures.</p> | <p>3. Develop, by the end of Year 1, criteria for prioritizing structures to be retrofitted.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Pollution Prevention for Municipal Operations PPMO-3 – Maintaining Stormwater Structures

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal operations to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“Maintain maintenance programs, procedures, and/or policies for structural controls located on the permittee's properties or permittee maintained rights-of-way that reduce pollutants (including floatables) from runoff that are discharged from the MS4. Schedules for the maintenance requirements for the effective control and prevention of pollution shall also be included in the programs, procedures, and/or policies.”

3. Element Task, Frequency, and Responsible Party

See Table PPMO-3

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for reviewing existing procedures used by other departments related to the maintenance of existing stormwater quality structures on LFUCG property. New procedures will be developed to address areas that need improvement. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Maintain copies of programs and procedures, tracking changes as needed.
- Keep copies of schedules and maintenance logs.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPMO-3 – Maintaining Stormwater Structures

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Develop and begin implementation of a program to maintain stormwater quality controls on LFUCG property within one year of permit issuance. Include maintenance, cleaning, and repairs based on inspection findings.</p> <p>See Summary of Measurable Goals Attachment 2.</p> | <p>4. Complete within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Develop a database of stormwater quality controls at municipal facilities, including LFUCG properties and right of way that discharge to the MS4.</p> | <p>5. Complete within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Pollution Prevention for Municipal Operations

PPMO-4 – Municipal Practices

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal operations to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain maintenance programs, procedures, and/or policies for controlling sources of pollutants. These programs or procedures shall be intended to reduce pollutants (including floatables) from runoff from municipal operations that are discharged from the MS4.

“Maintain programs, procedures, and/or policies for operating and maintaining public streets, roads, and highways that reduce pollutants from stormwater runoff from the MS4. Procedures or policies shall be maintained that reduce the impact of discharges from the MS4 upon receiving waters.

“Maintain programs, procedures, and/or policies for deicing operations that reduce impact of these pollutants in discharges from the MS4 upon receiving waters.

“Maintain maintenance programs, procedures, and/or policies for controlling sources of pollutants which shall be intended to reduce pollutants (including floatables) from runoff from municipal areas that are discharged from the MS4.

“Maintain programs, procedures, and/or policies for the proper storage of materials and equipment to reduce or eliminate pollutants (including floatables) from runoff from storage and operations sites.

“Maintain a program, procedures, and/or policies to reduce pollutants in discharges from MS4 associated with the application of pesticides, herbicides, and fertilizers.”

3. Element Task, Frequency, and Responsible Party

See Table PPMO-4

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for pollution prevention related to municipal good housekeeping practices. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

Existing procedures and documents related to pollution prevention plans are contained in the following appendices:

Appendix X – Integrated pest management plans, spill response procedures, and groundwater protection plans for LFUCG golf courses.

Appendix Y – Spill response procedures and groundwater protection plans for the detention center, compost pad, Division of Engineering, and Division of Police.

Appendix Z – LFUCG Building Maintenance and Construction, Universal Waste Program Guidelines

Appendix AA-HH – Pollution prevention plans and SPCC plans for the treatment plans and pump stations.

Appendix JJ – Greenway Masterplan

Appendix LL – List of culverts inspected by LFUCG after each rainfall greater than 1 inch.

5. Documentation

- Retain copies of municipal operations and maintenance manual and document any updates.
- Retain copies of non-municipal operations and maintenance protocols and document any updates.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPMO-4 – Municipal Practices

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|---|
| Maintenance Activities for LFUCG Maintained Streets and Roads Review, update, and begin implementation of procedures for maintenance activities for LFUCG maintained streets and roads, including street sweeping. Review existing maintenance procedures and make suggestions or recommendations as necessary that would lead to improved receiving water quality. | 6. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Deicing Operations Review, update, and begin implementation of procedures for deicing operation by all divisions that have deicing practices. Review existing deicing procedures and make suggestions or recommendation as necessary that would lead to improved receiving water quality. | 7. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Maintenance Activities for Facility Grounds, Rights-of-Way, Drainage Channels, and Greenways Review, update, and begin implementation of procedures for maintenance activities for facility grounds, rights-of-way, and drainage channels, and make suggestions or recommendations as necessary that would lead to improved receiving water quality. | 8. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Materials and Equipment Storage Review, update, and begin implementation of procedures for materials and equipment storage. Review Risk Management's existing procedures and implementation thereof. | 9. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Controls for the Application of Turf Management Chemicals Review, update, and begin implementation of procedures for controls for the application of turf management chemicals. Review procedures for pesticide, herbicide, and fertilizer application and make recommendations as necessary that would lead to improved receiving water quality. | 10. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| General Formalize Operations and Maintenance protocols for LFUCG staff that will cover the following topics: <ul style="list-style-type: none"> • Roadway and parking lot maintenance. • Deicing. • Grounds and drainage way maintenance. • Equipment and material storage. • Pesticide, herbicide, and fertilizer application. | 11. Complete within two years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Pollution Prevention for Municipal Operations

PPMO-5 – Inventory, Monitoring, & Inspection

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal operations to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies for the inspection, surveillance, and monitoring of structural source controls to reduce pollutants (including floatables) from stormwater runoff from municipal operations from the MS4. The permittee shall maintain schedules related to the inspection and monitoring of pollution prevention controls. The permittee shall maintain an inventory of the structural and source controls, areas of use, and operational and maintenance records.

“Stormwater structural controls shall be monitored that discharge into the MS4 and waters of the Commonwealth. The parameters monitored shall be for the constituents for which the structure was designed to reduce and any other constituents of concern for the receiving waters.”

3. Element Task, Frequency, and Responsible Party

See Table PPMO-5

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for inventorying, monitoring, and inspecting BMPs. Other LFUCG departments will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Maintain maps and inventory of structures.
- Document inspection schedule, procedures, and checklists, including any updates.
- Keep copies of operational and maintenance records related to each structural and source control inspected.
- Keep monitoring results.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPMO-5 – Inventory, Monitoring, & Inspection

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|---|
| Create an inventory and map of stormwater quality control structures on LFUCG property. | 5. Develop a database of stormwater quality controls at municipal facilities within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop and commence implementation an inspection schedule for known stormwater quality controls at LFUCG facilities. See Summary of Measurable Goals Attachment 2. | 12. Develop inspection schedule by January 31, 2009 and commence implementation of inspection schedule by January 31, 2010. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop procedures and checklists to facilitate inspections of known stormwater quality controls. | 13. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Conduct inspections of known stormwater quality controls. Include the following: <ul style="list-style-type: none"> Review operation and maintenance records. Conduct necessary monitoring. Schedule and perform any necessary maintenance, cleaning, or repairs based on results of inspections. | 14. Inspect known stormwater quality controls at LFUCG facilities once during the renewed MS4 KPDES permit cycle or at the frequency specified in the inspection schedule. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop and implement procedures to identify, prioritize, and monitor (water sampling) select stormwater quality controls. | 15. Develop procedures within one year of permit issuance. Begin implementation of procedures in Year 2. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Pollution Prevention for Municipal Operations

PPMO-6 –Training

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal operations to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall provide training to appropriate employees and the public regarding the proper implementation of structural and source controls to reduce pollutants (including floatables) from stormwater runoff discharged from the MS4.

“Provide training for appropriate employees regarding stormwater pollution prevention measures for structural and source controls, inspection procedures, and enforcement protocols. The training will discuss stormwater pollution prevention through the proper planning, construction, operation, and maintenance of structural and source controls. The training shall discuss the impacts to the waters of the Commonwealth if such control measures are not used or are not properly planned, implemented, operated, or maintained. It shall also discuss proper procedures for effective pollutant control and the enforcement mechanisms of the local, state, and federal regulating authorities.”

3. Element Task, Frequency, and Responsible Party

See Table PPMO-6

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for training staff on pollution prevention for municipal operations. Other LFUCG departments and third party groups will be

involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of training modules and presentations, showing revisions as they are made.
- Keep track of the number of training activities conducted, including copies of agendas, lists of attendees, etc.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table PPMO-6 – Training

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>Identify staff and third party groups who are capable of providing training on pollution prevention for municipal operations.</p> <p>Prepare and/or use available training modules and presentations specifically tailored for municipal staff.</p> | <p>16. Complete by end of Year 1.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Develop training for LFUCG employees that covers the following topics:</p> <ul style="list-style-type: none"> • Stormwater pollution prevention measures for structural and source controls, • inspection procedures, • enforcement protocols, • proper planning, construction, operation, and maintenance of structural and source controls, • impacts to receiving water quality, and • enforcement mechanisms of the local, state, and federal regulating authorities. • Maintenance in and along drainage ways and stormwater management areas | <p>17. Conduct one training session per year for employees.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Develop audience surveys to measure attendance and evaluate the extent to which the target audience is being reached and ways to expand the audience reached.</p> | <p>18. Complete survey forms within 12 months of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Pollution Prevention for Municipal Operations

PPMO-7 – Reporting and Record Keeping

(see Reporting and Record Keeping section)

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention

IN-1 Legal Prohibition/Control Authority

IN-2 Industrial Inventory

IN-3 Evaluation

IN-4 Pollution Prevention Programs

IN-5 Inspection

IN-6 Monitoring

IN-7 Enforcement of Controls

IN-8 Education

IN-9 Training

IN-10 Reporting and Record Keeping



**Industrial Facility and Municipal Waste Facility Stormwater
Pollution Prevention Program
IN-1 – Legal Prohibition/Control Authority**

(see Legal Prohibition and Control Authority section)

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

IN-2 – Industrial Inventory

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirements

“The permittee shall maintain an inventory of municipal waste handling facilities hazardous waste treatment facilities, disposal and recovery facilities, industrial facilities that are subject to Section 313 of Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the permittee determines through evaluation and monitoring are contributing significant pollutants from runoff to the MS4.

“Business Inventory - Maintain an updated listing of industries and commercial operations that have significant potential for discharges into the MS4 and stream systems of the permit coverage area.”

3. Element Task, Frequency, and Responsible Party

See Table IN-2

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for maintaining the inventory of industrial and municipal waste facilities. Other LFUCG departments, including the Department of Public Safety, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Maintain mapping and inventories electronically.
- Keep copies of procedures, including any changes as they are made.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IN-2 – Industrial Inventory

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|--|
| <p>Update the inventory of Industrial Facilities. Appendix A contains the current list of Tier II facilities and industries that have a state stormwater permit. Include municipal waste handling facilities and municipal landfills.</p> <p>Compile a list of pertinent information regarding the Industrial Facilities. Request Industrial Facilities to report the location of their outfalls and type of discharge. (Develop form to facilitate this reporting.)</p> <p>Develop a schedule to verify the existing inventory on a watershed basis.</p> <p>Develop procedures for verifying/adding new industries to the inventory.</p> | <p>1. Update the inventory of Industrial Facilities with reasonable potential to discharge pollutants to the MS4 on an annual basis commencing January 31, 2009.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Develop a database to track relevant information, including enforcement and corrective action, regarding Industrial Facilities and High-Risk Commercial Facilities.</p> | <p>2. Complete by January 31, 2009.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Compile an inventory of High-Risk Commercial Facilities. Appendix C contains the current list of Hazardous Waste Generators.</p> <p>Develop procedures for annually updating the inventory.</p> | <p>3. Complete by July 1, 2008. Update this inventory annually commencing in calendar year 2009.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

IN-3 – Evaluation

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies to review and evaluate the stormwater pollution plans, programs, and procedures of the municipal waster and industries it determines present significant sources of stormwater pollutants to the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table IN-3

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for evaluating the stormwater pollution prevention plans for the industrial and municipal waste facilities. Other LFUCG departments, including the Department of Public Safety, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of the evaluation procedures, including changes made from year-to-year.
- Keep copies of the evaluation checklists.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IN-3 – Evaluation

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|---|
| Develop and propose an ordinance to the UCC that would require regulated Industrial Facilities and locally identified High-Risk Commercial Facilities to develop and implement SWPPPs even if they are not otherwise required to have a SWPPP. | 4. Propose to UCC by July 1, 2009. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Develop a schedule and procedure to evaluate the SWPPPs of Industrial Facilities and municipal waste facilities. The procedures will include steps to take if a SWPPP is found to be inadequate or inaccurate.</p> <p>Develop checklists of items required in the SWPPPs and provide the checklists to Industrial Facilities for their use in SWPPP preparation.</p> | 5. Complete within two years of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

IN-4 – Pollution Prevention Programs

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall require "Pollution Prevention Plans" be created, implemented and enforced for municipal waste facilities and industries it determines present significant potential sources of stormwater pollutants to the MS4. These plans shall establish policies and procedures for best management practices to reduce pollutants from municipal waste and industrial facilities in stormwater discharges to the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table IN-4

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for ensuring that SWPPPs are created, implemented, and enforced for industrial and municipal waste facilities. Other LFUCG departments, including the Department of Public Safety, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of SWPPPs, preferably in electronic format.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IN-4 – Pollution Prevention Programs

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|---|
| Develop example SWPPPs for Industrial Facilities and High-Risk Commercial Facilities. The example SWPPPs will include general and industry-specific BMPs that can be used by the industrial facilities. Include these on the stormwater website. | 6. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop SWPPPs for any municipal waste facility that does not currently have one. | 7. Complete by July 1, 2008. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop procedures and schedules for requiring submittal of SWPPPs from locally identified High-Risk Commercial Facilities. | 8. Develop procedures and schedules by the end of Year 3. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

IN-5 – Inspection

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain and enforce programs, procedures, and/or policies for the inspection of municipal waste facilities and industries it determines present significant potential sources of stormwater pollutants to the MS4. The programs, procedures, and/or policies shall identify priorities and procedures for inspections.”

3. Element Task, Frequency, and Responsible Party

See Table IN-5

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for ensuring that inspections of industrial and municipal waste facilities take place. Other LFUCG departments, including the Department of Public Safety, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of procedures, including tracking of procedure revisions.
- Keep copies of prioritized lists of industries.
- Keep copies of inspection records.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IN-5 – Inspection

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|--|
| <p>Develop procedures for conducting inspections of Industrial Facilities and municipal waste facilities to ensure compliance with local ordinances and requirements regarding pollution prevention.</p> <p>Procedures will include checklists for use by the field inspectors. Appendix B contains an example inspection form.</p> <p>Procedures will also include education and enforcement mechanisms to address any deficiencies or violations found at the facilities.</p> <p>Develop a prioritization system to guide the order of inspections.</p> | <p>9. Develop procedures within one year of permit issuance.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Inspect Industrial Facilities at least once every two years.</p> <p>Put inspection results in the database developed in IN-2.</p> | <p>10. Inspect 90% of the Industrial Facilities with reasonable potential to discharge pollutants to the MS4 once every two years, commencing in calendar year 2009.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Inspect 20% of the locally identified High-Risk Commercial Facilities each year.</p> <p>Put inspection results in the database developed in IN-2.</p> | <p>11. Inspect 20% of the High-Risk Commercial Facilities with reasonable potential to discharge pollutants to the MS4 each year, commencing in calendar year 2009.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

IN-6 – Monitoring

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement – IN-6

“The permittee shall create, implement, and enforce programs, procedures, and/or policies for the monitoring of stormwater discharges from municipal waste facilities and industries it determines presents significant potential sources of stormwater pollutants to the MS4. The monitoring program, procedures, and/or policies shall include sampling from outfalls (or other field screening points) from the facilities and from major or representative outfalls to the waters of the Commonwealth from the MS4. Representative in-stream sampling locations shall be used as appropriate.

“Municipal Waste Facility and Industrial Site Outfall Monitoring – Stormwater outfalls deemed to yield representative samples of the stormwater runoff from selected municipal waste facilities or industrial sites determined to present a significant source of stormwater pollutants to the MS4 shall be monitored at least once every two (2) years, or as appropriate.

“Major Outfall Screening – Major outfalls from industrial activity, as defined by Part III, C, Outfall Mapping, shall be sampled for appropriate parameters to facilitate illicit discharge screening. Dry weather screening shall be performed once every two (2) years. Wet weather screening shall be performed once for each outfall during the five (5) year permit cycle. See Table 7, *Water Monitoring Program*.

“Representative Outfall Screening – Representative outfalls, not considered Major Outfalls, that are determined to yield representative data shall be screened for appropriate parameters once during the five (5) year permit cycle. These shall be screened during dry weather but may be part of an investigative study during wet weather. See Table 7, Water Monitoring Program.

“In-stream Sampling – "In stream" screening points that are determined to yield representative data will be screened for appropriate parameters once every two years. See Table 7, Water Monitoring Program.”

2. KPDES Permit Requirement – MON-2

“The permittee shall create and maintain monitoring programs, procedures, and/or policies to determine compliance and noncompliance with the requirements of its MS4 programs. Monitoring and screening locations may include those used in MON - 1 field screening for pollutant source identification. The permittee shall maintain an inventory of all field screening locations. Field screening points that are determined to yield representative data shall be accompanied by a narrative as to why that location was chosen; the frequency of sampling; parameters to be sampled; and a description of the sampling equipment.

“Stormwater shall be monitored to control pollutants from industries identified and inventoried as significant potential sources of pollutants in stormwater runoff to the MS4. The following constituents shall be monitored for the applicable industrial sites: any pollutants limited in industrial effluent guideline subcategories; any pollutant listed in an existing KPDES permit for a facility; oil & grease; chemical oxygen demand; 5-day biochemical oxygen demand; total suspended solids; total phosphorus, total Kjeldahl nitrogen; nitrate plus nitrite nitrogen, and any other pollutants of concern.

“Stormwater shall be monitored to control pollutants from municipal waste handling facilities discharging to the MS4. The following constituents shall be monitored for the applicable industrial sites: any pollutant listed in any existing KPDES permit for a facility; oil & grease; chemical oxygen demand; 5-day biochemical oxygen demand; total suspended solids; total phosphorus, total Kjeldahl nitrogen; nitrate plus nitrite nitrogen, and any other pollutants of concern.

“In-stream sites shall be monitored to control pollutants from industries identified and inventoried as potential sources of pollutants in stormwater runoff to the MS4. One set of sampling shall be performed every two (2) years. A dry and wet weather sample shall be taken along with a stream sediment sample. The following constituents shall be monitored for the applicable industrial sites: any pollutants limited in industrial effluent guideline subcategories; any pollutant listed in an existing KPDES permit for a facility; oil & grease; chemical oxygen demand; 5-day biochemical oxygen demand; total suspended solids; total phosphorus, total Kjeldahl nitrogen; nitrate plus nitrite nitrogen, and any other pollutants of concern.

“Stormwater structural controls shall be monitored that discharge into the MS4 and waters of the Commonwealth. The parameters monitored shall be for the constituents for which the structure was designed to reduce and any other constituents of concern for the receiving waters.

“Monitoring necessary for any enforcement action to assure compliance shall be performed for the investigation and surveillance of a potential source of pollutants from illicit discharges, improper disposal, or other actions which result in the release of pollutants to the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table IN-6

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for monitoring related to the Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program. Other LFUCG departments, including the Department of Public Safety, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of procedures, including tracking of procedure revisions.
- Keep maps of sampling sites and matrix showing when sites were sampled.
- Keep monitoring results.
- Keep copies of any field notes.
- Keep documentation on why sites were chosen, the frequency sampled, the parameters sampled, and sampling equipment descriptions.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IN-6 – Monitoring

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>Industrial Monitoring Develop a program that requires significant Industrial Facilities to conduct and report wet weather monitoring.</p> | <p>12. By July 1, 2009, develop and propose an ordinance to the UCC that authorizes LFUCG to require Industrial Facilities and High-Risk Commercial Facilities with the potential to discharge pollutants in substantial amounts to the MS4 to develop and implement a stormwater monitoring program that includes providing the monitoring results to LFUCG.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Municipal Waste Facility Monitoring Conduct wet weather outfall monitoring at municipal waste facilities.</p> | <p>13. Commencing in calendar year 2008, conduct annually.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Major Outfall Screening Review and update procedures to conduct dry weather and wet weather sampling at large industrial outfalls of industrial facilities on the inventory. Dry weather sampling will be done once every two years. Wet weather sampling of major outfalls will be done when appropriate. (See IDDE-3). Conduct sampling at sites that follow the criteria listed in the permit.</p> | <p>14. Commencing in calendar year 2009, conduct dry weather screening at 90% of large industrial outfalls of industrial facilities on the inventory once every two years. 15. Conduct major outfall wet weather</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

| | | |
|---|--|---|
| | screening where appropriate based on results from the in-stream water quality monitoring program. | |
| Representative Outfall Screening Review and update procedures to conduct dry weather sampling at representative outfalls and field screening points. These are outfalls or points that are not major outfalls, but are locations of interest. Consideration should be given to pollutants of concern, past compliance history, designated use of the receiving water, and potential for environmental damage. They will be sampled once per permit cycle. (See IDDE-3). | 16. Upon reissuance of the renewed MS4 KPDES permit, conduct representative outfall dry weather screening once per permit cycle. | Department of Public Works and Development and/or Department of Environmental Quality |
| In-Stream Sampling In-stream sampling will occur in conjunction with the Water Quality Monitoring Program element. If additional in-stream screening points are warranted, follow the sampling procedures associated with the Water Quality Monitoring Program (MON-3). | | Department of Public Works and Development and/or Department of Environmental Quality |
| Investigation, Surveillance, and Enforcement Develop procedures for monitoring necessary to support enforcement actions upon release detection or failure to comply with required controls. | 17. Develop procedures. | Department of Public Works and Development and/or Department of Environmental Quality |
| Compile all sampling field data and laboratory results in a database. Put results on website and in annual report when finalized. Include documentation regarding why field screening sites were chosen, the frequency of sampling, the parameters sampled, and a description of the sampling equipment. | 2. Develop database by January 31, 2009. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

IN-7 – Enforcement of Controls

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall maintain enforcement programs, policies, and procedures to require compliance with the requirements of the pollution prevention programs for municipal waste facilities and industrial sites that discharge stormwater to the MS4.”

3. Element Task, Frequency, and Responsible Party

See Table IN-7

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for enforcement related to the Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program. Other LFUCG departments, including the Department of Public Safety and the Department of Law, will be involved in assisting Public Works and Development and/or the Department of Environmental Quality in this task.

5. Documentation

- Document enforcement programs/procedures/policies, including tracking of revisions.
- Keep records on enforcement actions related to each industry or facility.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Appendix F contains the proposed IDDE enforcement procedures that address such things as notice of violations, administrative orders, and penalties. Appendix O contains enforcement procedures of the hearing boards.

Appendix O contains the enforcement protocols for addressing stormwater quality and includes the following:

- an overview of existing ordinances and regulations
- an overview of enforcement authorities for the Commissioner of Public Works, Director of the Division of Engineering, Citation Officers, Inspectors, and the Infrastructure Hearing Board
- enforcement protocols, including civil citations and a schedule of fines
- future enforcement authorities

Table IN-7 – Enforcement of Controls

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|--|
| <p>Review and recommend changes to LFUCG ordinances related to enforcement of controls.. Existing ordinances are contained in Appendix P.</p> <p>Review the following and recommend changes where appropriate:</p> <ul style="list-style-type: none"> • Appendix O Enforcement Protocols • Article IX, Chapter 16 of the Municipal Code related to the hearing boards <p>Develop and commence implementation of an Industrial and High-Risk Commercial Facility enforcement protocol for detecting and enforcing against violations of stormwater management requirements applicable to Industrial and High-Risk Commercial Facilities. The enforcement protocol shall provide for use of escalating enforcement remedies. Such protocol shall serve as a guide in LFUCG's enforcement program but shall not limit LFUCG's enforcement discretion in particular cases.</p> <p>Track enforcement efforts in database developed in IN-2.</p> | <p>18. Complete within one year of permit issuance.</p> <p>26. By July 1, 2009, develop and commence implementation of an Industrial and High-Risk Commercial Facility enforcement protocol for detecting and enforcing against violations of stormwater management requirements applicable to Industrial and High-Risk Commercial Facilities. The enforcement protocol shall provide for use of escalating enforcement remedies. Such protocol shall serve as a guide in LFUCG's enforcement program but shall not limit LFUCG's enforcement discretion in particular cases.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

IN-8 – Education

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee shall make available educational materials and/or multimedia presentations regarding the pollution prevention and enforcement programs and procedures to control pollutants in stormwater discharges to the MS4 from municipal waste facilities and industries. Educational materials shall discuss the impacts to the waters of the Commonwealth if such control measures are not used or are not properly implemented, constructed, operated or maintained.”

3. Element Task, Frequency, and Responsible Party

See Table IN-8

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for education related to the Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program. Other LFUCG departments, including the Department of Administrative Services, will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Retain copies of educational materials.
- Record website hits.

- Keep log of printed materials dispersed.
- Retain copies of multimedia presentations.
- Track changes to educational materials and multimedia presentations.
- Record number of times multimedia presentations were shown and the size of the audience.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IN-8 – Education

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|---|
| Put links to assist industries with compliance on the website (created in PE-1). Address pollution prevention, enforcement mechanisms, and impacts to receiving streams if pollution prevention controls are not used or are used improperly. | 19. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Put links to information about the municipal waste facilities on the website (created in PE-1). Provide examples of LFUCG activities. Showcase examples from industries. | 19. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Put links to the checklist of SWPPP requirements and example SWPPPs on the website (created in PE-1). | 21. Have copies of example SWPPPs available for distribution within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Provide information on maintaining BMPs already developed by EPA and others. | 19. Have functional stormwater website within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Notify the public about industrial monitoring via multimedia presentations. | 21. Complete one presentation per year. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program

IN-9 – Training

1. Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

2. KPDES Permit Requirement

“The permittee(s) shall provide training for the proper implementation of programs and procedures to control pollutants in stormwater discharges from municipal waste facilities and industrial activities to the MS4.

“Training for Industry - Provide training for industry groups. The training will discuss stormwater pollution prevention through the proper implementation, operation, and maintenance of pollution prevention measures to control pollutants in stormwater discharges from industrial sites to the MS4. The training shall discuss the impacts to the waters of the Commonwealth if such control measures are not used or are not properly planned, implemented, operated, or maintained. It shall also discuss proper procedures for effective pollutant control and the enforcement mechanisms of the local, state, and federal regulating authorities.

“Training for Employees - Provide training for employees. The training will discuss stormwater pollution prevention through the proper implementation, operation, and maintenance of pollution prevention measures to control pollutants in stormwater discharges from municipal waste facilities to the MS4. The training will discuss stormwater pollution prevention through the proper planning, construction, operation, and maintenance of structural and source controls. The training shall discuss the impacts to the waters of the

Commonwealth if such control measures are not used or are not properly planned, implemented, operated, or maintained. It shall also discuss proper procedures for effective pollutant control and the enforcement mechanisms of the local, state, and federal regulating authorities.”

3. Element Task, Frequency, and Responsible Party

See Table IN-9

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for training related to the Industrial Facility and Municipal Waste Facility Stormwater Pollution Prevention Program. Other LFUCG departments, including the Department of Administrative Services, and outside groups will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of training modules and presentations, showing revisions as they are made.
- Keep track of the number of training activities conducted, including copies of agendas, lists of attendees, etc.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table IN-9 – Training

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|---|
| <p>Identify staff and third party groups who are capable of providing training on Industrial Facility stormwater pollution prevention.</p> <p>Prepare and/or use available training modules and presentations specific to the following audiences: industries and employees. Cover the subjects of pollution prevention measures, SWPPPs, impacts to receiving waters, and enforcement mechanisms.</p> | 22. Complete by end of Year 1. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Training for Industry.</p> <ul style="list-style-type: none"> • Make industry-specific • Pollution prevention measures • SWPPPs • Impacts to receiving waters • Enforcement mechanisms • Maintenance of stormwater management areas | 23. Beginning in Year 2, conduct one workshop per year for Industrial Facilities and one workshop per year for High-Risk Commercial Facilities. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Training for employees</p> <ul style="list-style-type: none"> • Pollution prevention measures • SWPPPs specific to municipal facilities using structural and source controls • Inspection procedures • Impacts to receiving waters • Enforcement mechanisms | 24. Conduct one training event per year. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop audience surveys to measure attendance and evaluate the extent to which the target audience is being reached and ways to expand the audience reached. | 25. Complete survey forms within 12 months of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

**Industrial Facility and Municipal Waste Facility Stormwater
Pollution Prevention Program
IN-10 – Reporting and Record Keeping**

(see Reporting and Record Keeping section)

Water Quality Monitoring

MON-1 Field Screening for Pollutant Source Identification

MON-2 Compliance Sampling

MON-3 Pollution Prevention Program Assessment Data
Collection

MON-4 Public Education and Public Outreach

MON-5 Seasonal Pollutant Loading and Event Mean
Concentrations

MON-6 Education and Training

MON-7 Evaluation

MON-8 Reporting and Record Keeping



Water Quality Monitoring

MON-1 – Field Screening for Pollutant Source Identification

(see IDDE-3)

Water Quality Monitoring

MON-2 – Compliance Sampling

(see IN-6, PPMO-5, and PPRC-4)

Water Quality Monitoring

MON-3 – Pollution Prevention Program Assessment Data Collection

1. Overview

“The objective is to develop and implement water monitoring programs and procedures to minimize pollutants from stormwater runoff to the municipal separate storm sewer system (MS4) from the coverage area specified by the permit.”

2. KPDES Permit Requirement

“The permittee shall maintain programs, procedures, and/or policies for the collection of representative data to assess the long term impacts upon the waters of the Commonwealth. Field screening locations shall include major outfalls, facility outfalls, in-stream screening points, or other field screening locations that are determined to yield representative data. Field screening points that are determined to yield representative data shall be accompanied by a narrative as to why that location was chosen; the frequency of sampling; parameters to be sampled; and a description of the sampling equipment.

“Conduct a monitoring program for the "Expansion Area 2."

“Conduct a dry weather monitoring program for bacteriologicals, conventional parameters, nutrients, and metals at one location in each of the seven major urbanized watersheds: Town Branch, Wolf Run, South Elkhorn Creek, North Elkhorn Creek, Cane Run, West Hickman, and East Hickman.

“Conduct a macroinvertebrate sampling program at one location in each of the seven major urbanized watersheds: Town Branch, Wolf Run, South Elkhorn Creek, North Elkhorn Creek, Cane Run, West Hickman, and East Hickman.

“Conduct a fish sampling program at one location in each of the seven major urbanized watersheds: Town Branch, Wolf Run, South Elkhorn Creek, North Elkhorn Creek, Cane Run, West Hickman, and East Hickman.

“Conduct a habitat assessment program at one location in each of the seven major urbanized watersheds: Town Branch, Wolf Run, South Elkhorn Creek, North Elkhorn Creek, Cane Run, West Hickman, and East Hickman.

“Conduct a wet weather monitoring program for bacteriologicals, conventional parameters, nutrients, and metals at one location in each of the seven major, urbanized watersheds: Town Branch, Wolf Run, South Elkhorn Creek, North Elkhorn Creek, Cane Run, West Hickman, and East Hickman.

“Create a program and procedures for establishing permanent monitoring stations throughout the seven major, urbanized watersheds. A pilot study station shall be established to conduct continuous monitoring of pH, conductivity, temperature, dissolved oxygen, precipitation, and stream flow at one permanent location.”

3. Element Task, Frequency, and Responsible Party

See Table MON-3

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for water quality monitoring. LFUCG’s stormwater consultant will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

The existing procedures related to water quality monitoring are located in Appendix V. The existing laboratory results are contained in Appendix KK.

5. Documentation

- Keep copies of protocols.
- Keep maps of sampling sites.
- Keep monitoring results.
- Keep documentation on why sites were chosen, the frequency sampled, the parameters sampled, and sampling equipment description.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table MON-3 – Pollution Prevention Program Assessment Data Collection

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|-----------------|---|
| <p>Expansion Area 2 Stormwater Master Plan</p> <p>Update the Expansion Area 2 Monitoring Program to focus on monitoring that will evaluate the effectiveness of the regional stormwater controls and design manual. Expansion Area 2 is the large area of land (>4,500 acres) added to the Urban Services Area on the east side of the city in the mid-1990s.</p> <p>Conduct monitoring at select sites according to the procedures.</p> | 1. Annually | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Dry Weather Monitoring for Major Watersheds</p> <p>Review and update procedures for conducting dry weather in-stream monitoring on a quarterly basis at one site in each of the seven major watersheds.</p> <p>Conduct monitoring according to the procedures.</p> | 2. Quarterly | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Macroinvertebrate Sampling for Major Watersheds</p> <p>Review and update procedures for conducting macroinvertebrate sampling on an annual basis at one location in each of the seven major watersheds.</p> <p>Conduct sampling according to the procedures.</p> | 3. Annually | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Fish Sampling for Major Watersheds</p> <p>Review and update procedures for conducting fish sampling on an annual basis at one location in each of the seven major watersheds.</p> <p>Conduct sampling according to the procedures.</p> | 4. Annually | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Habitat Assessment for Major Watersheds</p> <p>Review and update procedures for conducting habitat assessment on an annual basis at one location in each of the seven major watersheds.</p> <p>Conduct assessment according to the procedures.</p> | 5. Annually | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Wet Weather Monitoring for Major Watersheds</p> <p>Develop a procedure for collecting wet weather samples at in-stream monitoring sites on a quarterly basis. The sites will be the same as those sampled during dry weather monitoring.</p> <p>Conduct monitoring according to the procedures.</p> | 6. Quarterly | Department of Public Works and Development and/or Department of Environmental Quality |

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|---|--|
| <p>Creation of Permanent Monitoring Network</p> <p>Create a program and procedures for establishing a permanent monitoring network using the existing sites in the Expansion Area 2 in a trial study comparing continuous versus discrete monitoring.</p> <p>Acquire equipment needed to conduct pilot study.</p> <p>Conduct monitoring according to the procedures to compare continuous versus discrete monitoring.</p> <p>Once pilot study is evaluated, expand monitoring to the other six watersheds.</p> | <p>7. Begin Pilot Study of Continuous Monitoring in Year 2.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Compile all sampling field data and laboratory results in a database. Put results on website and in Annual Report when finalized.</p> <p>Include documentation regarding why field screening sites were chosen, the frequency of sampling, the parameters sampled, and a description of the sampling equipment.</p> | <p>8. Update annually.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Water Quality Monitoring

MON-4 – Public Education and Public Outreach

1. Overview

“The objective is to develop and implement water monitoring programs and procedures to minimize pollutants from stormwater runoff to the municipal separate storm sewer system (MS4) from the coverage area specified by the permit.”

2. KPDES Permit Requirement

“The permittee shall maintain a program to make results available to the public.”

3. Element Task, Frequency, and Responsible Party

See Table MON-4

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for providing water quality monitoring results to the public. LFUCG’s stormwater consultant will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of procedures, including updates.
- Maintain all sampling results.
- Record website hits.
- Track Open Records Requests.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table MON-4 – Public Education and Public Outreach

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|---|
| QA/QC'd monitoring results will be available on the website. | 9. Update annually. | Department of Public Works and Development and/or Department of Environmental Quality |
| Develop a procedure to update the website on an ongoing basis. | 10. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| Copies of monitoring results will be available for any Open Records Requests (see PI-2). | | Department of Public Works and Development and/or Department of Environmental Quality |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Water Quality Monitoring

MON-5 – Seasonal Pollutant Loading and Event Mean Concentration Estimates

1. Overview

“The objective is to develop and implement water monitoring programs and procedures to minimize pollutants from stormwater runoff to the municipal separate storm sewer system (MS4) from the coverage area specified by the permit.”

2. KPDES Permit Requirement

“The permittee shall maintain procedures to provide estimates for each major outfall of the seasonal pollutant load and the event mean concentration of a representative storm. The permittee shall perform the necessary calculations for the following parameters, as detected: total suspended solids, total dissolved solids, chemical oxygen demand, 5-day biochemical oxygen demand, oil and grease, fecal coliform, fecal streptococcus, e. coli, pH, total Kjeldahl nitrogen, nitrate plus nitrite, dissolved phosphorus, total ammonia, organic nitrogen, and total phosphorus. The calculation of seasonal pollutant loads and event mean concentration shall be done for each watershed based upon the following schedule: Town Branch and Wolf Run, South Elkhorn, Cane Run and North Elkhorn, West Hickman, and East Hickman.”

3. Element Task, Frequency, and Responsible Party

See Table MON-5

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for calculating estimated seasonal pollutant loadings and event mean concentrations. LFUCG’s stormwater consultant

will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Document calculation procedures.
- Keep copies of all calculations.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

**Table MON-5 – Seasonal Pollutant Loading and Event Mean Concentration
Estimations**

| Element Task/Activity | Measurable Goal | Responsible Party |
|---|--|--|
| <p>Compute seasonal pollutant loadings and event mean concentration estimates.</p> <p>Provide calculated estimates on the website and in the Annual Report.</p> | <p>11. 2008 – TB & WR 2009 – SE 2010 – CR & NE 2011 – WH 2012 – EH</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Water Quality Monitoring

MON-6 –Education and Training

1. Overview

“The objective is to develop and implement water monitoring programs and procedures to minimize pollutants from stormwater runoff to the municipal separate storm sewer system (MS4) from the coverage area specified by the permit.”

2. KPDES Permit Requirement

“The permittee shall maintain educational and training opportunities for citizens or employees involved in the monitoring programs of this category. The education and training activities shall address proper sampling procedures, safety protocols, sample handling, data collection, and record keeping.”

3. Element Task, Frequency, and Responsible Party

See Table MON-6

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for providing training to water quality monitoring volunteers and employees. LFUCG’s stormwater consultant will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Keep copies of training modules and presentations, showing revisions as they are made.
- Keep track of the number of training activities conducted, including copies of agendas, lists of attendees, etc.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table MON-6 – Education and Training

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Identify staff and third party groups who are capable of providing training on water quality monitoring.</p> <p>Prepare and/or use available training modules and presentations specific to those employees or citizens who will be conducting the monitoring.</p> | <p>12. Complete by end of Year 1.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Conduct training for employees and/or citizens involved in the monitoring components of this program element. Address the following:</p> <ul style="list-style-type: none"> • Proper sampling procedures • Safety protocols • Sample handling and preservation • Data collection • Record keeping and chain of custody | <p>13. Beginning in Year 2, complete at least one training event per year.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |
| <p>Develop audience surveys to measure attendance and evaluate the extent to which the target audience is being reached and ways to expand the audience reached.</p> | <p>14. Complete survey forms by end of Year 1.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled “Summary of Measurable Goals”.

Water Quality Monitoring

MON-7 – Evaluation

1. Overview

“The objective is to develop and implement water monitoring programs and procedures to minimize pollutants from stormwater runoff to the municipal separate storm sewer system (MS4) from the coverage area specified by the permit.”

2. KPDES Permit Requirement

“Through the comprehensive planning process for the effective implementation of pollution prevention programs to the maximum extent practicable, the permittee shall create and implement a program, procedures and/or policies to evaluate the effectiveness of its monitoring and field screening programs, procedures, and policies through the assessment of representative data. Furthermore, the assessments shall identify improvements or degradation of water quality in the waters of the Commonwealth.”

3. Element Task, Frequency, and Responsible Party

See Table MON-7

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for evaluating the water quality monitoring program. LFUCG’s stormwater consultant will be involved in assisting Public Works and Development and/or Environmental Quality in this task.

5. Documentation

- Document assessment and evaluation procedures, including updates.
- Document the annual assessment and evaluation.

6. Program Element Effectiveness

The success of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table MON-7 – Evaluation

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|--|--|
| <p>Develop a protocol to evaluate all the sampling results to determine the effectiveness of the monitoring program and an assessment as to whether water quality is improving or degrading.</p> <p>Conduct annual comparisons of data to determine relative receiving stream health.</p> <p>Conduct a comprehensive assessment in Year 5 of the permit that includes a trend analysis of changes in each watershed over the permit cycle.</p> | <p>15. Develop evaluation protocol in Year 1.</p> <p>16. Annually compare current year's data to prior year's data.</p> <p>17. Conduct trend analysis in Year 5.</p> | <p>Department of Public Works and Development and/or Department of Environmental Quality</p> |

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".

Water Quality Monitoring

MON-8 – Reporting and Record Keeping

(see Reporting and Record Keeping section)

Reporting and Record Keeping



Reporting and Record Keeping

The purpose of this section is to document all the reporting and record keeping requirements for the SWQMP. Furthermore, it covers the creation of the required “Annual Report” to the KDOW. The Annual Report is required under 40 CFR 122.42 (c). The following elements are required to be included in the Annual Report:

- 1) The status of implementing the components of the stormwater management program;
- 2) Proposed changes to the stormwater management program elements;
- 3) Revisions, if necessary, to the assessment of controls and the fiscal analysis of the SWQMP;
- 4) A summary of data, including monitoring data, that is collected throughout the permit year;
- 5) Annual expenditures and the proposed budget for the present year and the following year;
- 6) A summary describing the number and nature of enforcement actions, inspections, and public education, outreach & participation programs; and
- 7) Identification of water quality improvements or degradation.

The Reporting and Record Keeping section combines the last element of the eight SWQMP components: Public Education and Outreach (PE), Public Involvement and Participation (PI), Illicit Discharge Detection and Elimination (IDDE), Construction Site Stormwater Runoff Control (CS), Pollution Prevention in Residential and Commercial Areas (PPRC), Pollution Prevention for Municipal Operations (PPMO), Industrial Facility and Municipal Waste Facility Pollution Prevention Program (IND), and Water Quality Monitoring (MON).

The overview for the eight program elements related to Reporting and Record Keeping are included below. Then there is a common set of KPDES Permit requirements, Procedures, Documentation, and Table.

1. Overviews

Public Education and Outreach Overview

“The objective is to increase public awareness of water quality issues associated with discharges from the municipal separate storm sewer system (MS4) and to promote stewardship of the waters of the United States within the scope of this permit.”

Public Involvement and Participation Overview

“The objective is to increase public involvement in the management of the stormwater pollution prevention programs of Fayette County associated with discharges from the municipal separate storm sewer system (MS4).”

Illicit Discharge Detection and Elimination Overview

“The objective is to detect and prevent illicit connections and improper disposal of wastes into the MS4 by determining the types and sources of illicit discharges entering the system by establishing legal, technical, and educational means needed to prevent these discharges into the waters of the United States within the scope of this permit.”

Construction Site Runoff Control Overview

“The objective is to develop, implement, and enforce programs to minimize pollutants in stormwater runoff from construction sites to the municipal separate storm sewer system (MS4).”

Pollution Prevention in Residential and Commercial Areas and Pollution Prevention for Municipal Operations Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from residential and commercial land uses to the municipal separate storm sewer system (MS4).”

Industrial Facility and Municipal Waste Facility Pollution Prevention Program Overview

“The objective is to develop, implement, and enforce programs and procedures to minimize pollutants from stormwater runoff from municipal waste management and industrial sites to the municipal separate storm sewer system (MS4).”

Water Quality Monitoring Overview

“The objective is to develop and implement water monitoring programs and procedures to minimize pollutants from stormwater runoff to the municipal separate storm sewer system (MS4) from the coverage area specified by the permit.”

2. KPDES Permit Requirement

“The permittee shall provide an annual report on the aforementioned program elements in accordance with Part III, D, Annual Reporting Requirements. It shall provide a summary of these programs and any measures of effectiveness. The permittee shall maintain all records for the aforementioned program elements in this category for a minimum of five (5) years.”

3. Element Task, Frequency, and Responsible Party

See Table RR-1

4. Procedures

The Department of Public Works and Development and/or the Department of Environmental Quality will be responsible for compiling all records and preparing all reports associated with permit implementation. Other LFUCG departments will be involved in assisting with this task. In addition, the city’s stormwater consultant will assist in the preparation of the Annual Report.

5. Documentation

- Keep copies of the Annual Report and its supporting documentation.
- Track the amount of money budgeted and spent on each program element.
- Keep all the documentation listed under each program element.

6. Program Element Effectiveness

The effectiveness of the program will be determined by comparing actual achievements to the measurable goals listed in the table.

Table RR-1 – Reporting and Record Keeping

| Element Task/Activity | Measurable Goal | Responsible Party |
|--|---|---|
| Develop checklists for preparing the Annual Report. | 1. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Develop the contents of the Annual Report that covers the activities associated with each program element in accordance with Part III D of the permit. Include summaries of the programs and measures of effectiveness.</p> <p>The Annual Report will address the requirements of 40 CFR 122.42 (c).</p> | <p>2. Develop contents within one year of permit issuance.</p> <p>3. Complete the Annual Report each year in accordance with the schedule in the applicable MS4 KPDES permit.</p> | Department of Public Works and Development and/or Department of Environmental Quality |
| <p>Develop record keeping procedures that will allow for the retention of records for a period of five years.</p> <p>Partial list of records to be kept:</p> <p><u>PE</u> Number of people educated, contacted, or reached. Evaluation forms from workshops.</p> <p><u>PI</u> Number of people involved. Time and resources donated by the public.</p> <p><u>IDDE</u> Number of inspections and investigations. Number of illicit discharges, improper disposals, or exfiltration problems repaired. Number of enforcement actions. Number of people trained regarding IDDE. Number of public service announcements and multimedia presentations.</p> <p><u>CS</u> Number of people trained. Number of inspections. Number and results of enforcement actions.</p> <p><u>PPRC/PPMO</u> Inspection records. Operations and maintenance records and schedules. Monitoring results. Evaluation results. Number of enforcement actions.</p> | 4. Complete within one year of permit issuance. | Department of Public Works and Development and/or Department of Environmental Quality |

LFUCG Stormwater Quality Management Program

| | | |
|--|--|--|
| Number of people trained <u>IN</u> Number of facilities. Number of inspections. Number of enforcement actions. Monitoring results. Number of people trained regarding IN. <u>MON</u> Number of samples collected. Sampling results. | | |
|--|--|--|

Note: For ease of reference, the measurable goals in the table above are numbered the same as the ones in the SWQMP section entitled "Summary of Measurable Goals".